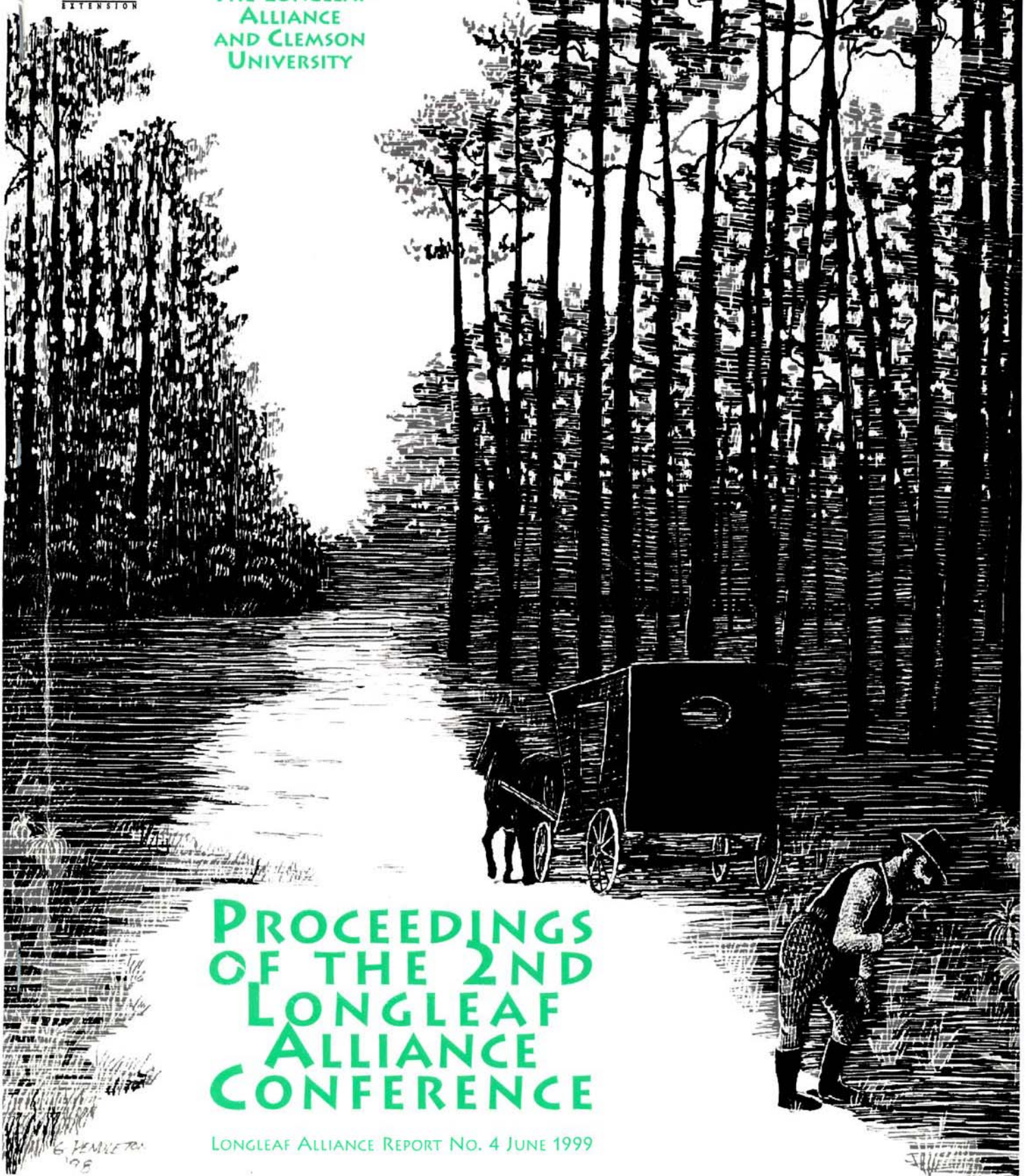




THE LONGLEAF ALLIANCE

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NOVEMBER 17-19, 1998
CHARLESTON,
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PROCEEDINGS OF THE 2ND LONGLEAF ALLIANCE CONFERENCE

LONGLEAF ALLIANCE REPORT NO. 4 JUNE 1999

6 JUNE 1999

Overstory disturbances in longleaf pine-wiregrass savannas: a management perspective

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ABSTRACT: The increased interest in producing high quality timber products while maintaining environmental amenities has challenged landowners to manage forests in an ecologically sound yet economically pragmatic fashion. Ecosystem management is one means to achieve these multiple goals. We define ecosystem management as operations that minimize the distinction between the natural (unmanaged) forest and the managed one. More specifically, management prescriptions would be molded from knowledge of how the longleaf forest responds to disturbances. The challenge is to successfully apply this definition into an operational prescription.

The longleaf pine-wiregrass ecosystem is an ideal candidate for developing ecosystem management practices because of its history of biological and anthropogenic disturbances. Canopy disturbances were a common event in the pre-European forest. Overstory gaps were caused by large, infrequent, stochastic events such as hurricanes or tornadoes and smaller, more frequent disturbances such as lightning, windthrow, or fire that killed 1-30 at a time. The result of these disturbances was even-aged groves nested within a mosaic of an uneven-aged forest. Of the remaining longleaf pine stands scattered across their original range few maintain this structural diversity. In September 1996 a study was initiated as a cooperative effort between the Joseph W. Jones Ecological Research Center, International Paper Southlands Experiment Forest, and Auburn University School of Forestry to address the stand-level implications of managing longleaf pine to produce similar functional and structural attributes of the unmanaged forest.