ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

The Floristic Composition and Diversity of Wetland Vegetation in Tello Wereda in Kefa Zone, Southwest Ethiopia

By:

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirement for the Degree of Master of Science in Biology

June 2006
AAU

ACKNOWLEDGEMENTS

I express my deeper and heart felt gratitude to my research advisors Prof Sebsebe Demissew and Prof Zerihun Woldu, Department of Biology, Addis Ababa University, for their consistent guidance, valuable suggestions, critical reading of the manuscript and constructive comments. I am grateful to Wenner-Gren foundation for Anthropological research (PI: Elisabeth Hildebrandi) for its partially funding of the fieldwork costs.

I would like to thank the National Herbarium of Ethiopia and staff members for allowing me to use the facilities available during the identification of plant specimens.

Finally, I would like to thank the school of graduate studies of Addis Ababa University for all educational, material and financial support during my stay in the University.

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Abstract

The present study was carried out in Kaffa Zone in general and Tello Wereda in particular, southwest Ethiopia. The study in wetland vegetation of the area was conducted between October 2005 and June 2006. The vegetation and environmental data were collected from 88 quadrats (during wet season) and 77 quadrats (during dry season) from the six study sites. The Purpose of the study was to investigate floristic composition and diversity of wetland vegetation in the area. The major issues addressed include floristic diversity, vegetation description, community type identification, site diversity, measurement of aboveground biomass and wetland plant inventory. During the study, the percentage cover abundance of each species was estimated and later converted into modified Braun-Blanquet 1-9 scale. Clipping of all the aboveground vegetation was carried out in 1 m^2 plot size, which is placed at the center of each 4 m^2 quadrat, used for plant community description. Some environmental variables and disturbance scale was recorded for each site. A total of 69 and 56 plant species representing 28 and 27 families were identified during wet and dry seasons respectively. The families Cyperaceae, Poaceae and Lamiaceae were represented by the highest number of species. All the vegetation data were analyzed with SYNTAX-2000, computer program. Three and four reasonable plant community types were obtained and described. The resulting clusters were interpreted as community types and were given names after two dominant plant species. Shannon-wiener diversity index was employed to analyze species diversity in the plant community types and the study sites. The clusters of stands were found to show variation due to differences in altitude, moisture contents, and other site conditions. Recommendations for the sustainable utilization of the vegetation resources at the study sites are provided.