

Dedication

To

My parents

Sisters

And brothers

**I dedicate this simple
work.**

Acknowledgement

I would like to express my all sincere thanks and Special gratitude to prof. Mustafa Suliman, supervisor of this thesis for his inspiring guidance, valuable comments and endurance through discussion to achieve this study, also my warm thanks to all my colleagues and specially teachers of Almontasir private school for girls.

I hopeful that this work will encourage the Government and NGOs in general and White Nile state in special to carry out the recommendations out line.

Contents

Content	Page No
Content	i.
Dedication	ii.
Acknowledgement	iii.
English Abstract	iv.
Arabic Abstract	v.
List of Figures	vi.
List of Tables	vii.
List of appendices	viii.
1. CHAPTER ONE	1
1.Introduction	1
1.1.General	1
1.2.Problem	2

1.3.Objectives	2
2. CHAPTER TWO	3
2. Literature Review	3
2.1. The Desert and Semi-Desert	3
2.2. The Grass Cover	3
2.3. Characteristics of Grasses	4
2.4. Importance of Grasses	5
2.5.The Wood Land Savannah	5
2.6. Botanical Description of Grasses	8
3. CHAPTER THREE	17
3.Materials and Methods	17
3.1.The Study Area	17
3.2. Geology and Soils	17
3.3. Climate	18
3.4. Vegetation	19
3.5. Population	19
3.6. Materials	20
3.7. Methods	20
4. CHAPTER FOUR	24
4. Results and Discussion	24
4.1.Results	24
4.2. Discussion	32
5. CHAPTER FIVE	34
5. Conclusion and Recommendations	34
5.1. Conclusion	34
5.2. Recommendations	34
6. References	36
7. Glossary	38

Abstract

This study was conducted in Algetaina locality, White Nile State. Sudan November 2005. Three sites were selected randomly in North-East of Algetaina at Qoz Abukilab to investigate the ecology and the economic importance of the vegetation cover.

Transects Reading and Interview were used for compiling data. Description of the plant species and their distribution were recorded. Tummam (***Panicum turgidum***), Marekh (***Leptadenia pyrotechnica***) were the most dominant species in the study area they form 33.49%, 5.48% respectively. The three sites had more than 50% vegetation cover. Non existences of some species were attributed to over-grazing, drought, and other agents.

Plant species associated with the area, their description, density and distribution were recorded. The species found in the areas play a vital role in combating desertification, fixing sand dunes and decreasing erosion.

On the other hand these plants represent fodder for livestock during the drought periods. Economically they provide construction materials, fire wood and fencing and locally they are used as medicinal plants for disease treatment.

خلاصة الأطروحة

أجري هذا البحث لمعرفة الأهمية البيئية والاقتصادي لبعض أنواع الأعشاب والشجيرات في محلية القطينة, النيل الأبيض, السودان نوفمبر 2005م. تضمنت الدراسة معرفة كثافة الغطاء العشبي والشجيرات الموجودة, وصفها, وتوزيعها الاكولوجي. تم اختيار ثلاثة مواقع في منطقة قوز أبو كلاب شمال شرق مدينة القطينة. استخدمت قراءة القطاعات, والم قابلة بسكان المنطقة لمعرفة الأهمية الاقتصادية والبيئية لهذه الأنواع. خلصت الدراسة إلي أن نباتي التمام و المرخ يسودون المنطقة بنسبة 33.4% و 5.48 % على التوالي. ويمثل الغطاء النباتي حوالي 50% في المواقع الثلاثة. و غياب بعض الحشائش

يرجع إلي عوامل عدة منها كثافة الرعي والمنافسة. أتضح من الدراسة أن هذه الحشائش تلعب دورا بيئيا هاما في هذه المنطقة حيث أنها تعمل علي تثبيت التربة وتعمل كمصدات للرياح مما يؤدي لتقليل التعرية و إيقاف الزحف الصحراوي, وأما دورها الاقتصادي فيتمثل في كونها علفا مهما لحيواناتهم في فترة الجفاف حيث تقل الأنواع الاخرى وهي أيضا الداعم الأساسي للسكان من حيث توفير حطب الوقود, عمليات البناء والتشييد, وتسوير المزارع. بالاضافه لدورها في الطب الشعبي حيث يستفاد من جذور المرخ للأغراض الطبية.

List of Tables

TABLES	PAGE NO
Table 1. Percentage of plants cover in sample 1	25
Table 2. Percentage of plants cover in sample 2	26
Table 3. Percentage of plants cover in sample 3	27
Table 4. percentage of plants composition	30

List of figures

FIGURES	PAGE NO
Fig. (1) plate of Transect reading	21
Fig. (2) Percentage of plants cover	28
Fig. (3) Socio economic importance	31

List of appendices

appendices	PAG E NO
Appendix (1) Ecological zones of Sudan.	40
Appendix (2) Description of semi-desert	41
Appendix (3) Types of savannah	42
Appendix (4) plate of <i>Leptadenia pyrotechnica</i>	43
Appendix (5) A camel feeds on <i>Leptadenia pyrotechnica</i>	44
Appendix (6) Distribution of <i>Panicum turgidum</i>	45
Appendix (7) Herd of cows grazing <i>Panicum turgidum</i>	46
Appendix (8) Types of plants cover on the qoz area	47
Appendix (9) Questionnaire questions	48
Appendix (10) <i>Acacia tortilis</i> associated with <i>Panicum turgidum</i>	49
Appendix (11) Sudan vegetation cover	50