

PASTORALISM IN INTERACTION

WITH OTHER FORMS OF LAND USE IN THE BLUE NILE AREA OF SUDAN II

[Eds Awad Alkarim and Günther Schlee]



HERBARIUM AND
PLANT DIVERSITY IN THE
BLUE NILE AREA, SUDAN

HALLE (SAALE) 2013

MAX PLANCK INSTITUTE FOR SOCIAL ANTHROPOLOGY
DEPARTMENT 'INTEGRATION AND CONFLICT'
FIELD NOTES AND RESEARCH PROJECTS III

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MAX PLANCK INSTITUTE FOR SOCIAL ANTHROPOLOGY
DEPARTMENT 'INTEGRATION AND CONFLICT'
FIELD NOTES AND RESEARCH PROJECTS III

Pastoralism in Interaction with other Forms of Land Use in the Blue Nile Area of the Sudan II: Herbarium and Plant Diversity in the Blue Nile Area, Sudan

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Back Cover: Pastoral animals and farmers' sorghum, Abu-Na'ama, 2012 (018.jpg, IMG_1517.jpg) © Awad Alkarim

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INTRODUCTION

(GÜNTHER SCHLEE)

What is presented here are some of the findings of a project undertaken by the Max Planck Institute for Social Anthropology with the University of Khartoum and the University of Sennar on ‘Pastoralism in interaction with other forms of land use in the Blue Nile area of the Sudan’. This is the second volume of field notes from this project in this series. This project aims at taking the claim to do political ecology seriously. Critics have pointed out that the term ‘political ecology’ has often been misused for things which were basically political anthropology or in other ways just about the politics of resource use. “Some, like Vayda and Walters (1999) feel that the entire political ecology paradigm is flawed in that it privileges political factors on an *a priori* basis in explaining human-environmental relationships” (McCabe 2004: 240). “It may not be an exaggeration that overreaction to ‘ecology without politics’ of three decades ago is resulting now in a ‘politics without ecology’” (Vayda and Walters 1999: 168-9, cited in McCabe 2004: 240). Ecology, of course, is first of all a natural science, and we try to incorporate that natural science part of political ecology as fully as we can.



Photo 1: Picture of Awad Alkarim with plant samples

(G. SCHLEE, IMG_1437.JPG)

One of the agriculturalists in our team, Awad Alkarim (Photo 1), has collected numerous plant samples with his team and had them identified by a botanist. Also, the density of pasture and its biomass in different seasons and under different forms of stress have been determined, but in an open range system pasture cannot be reduced to biomass and be ascribed a “carrying capacity” accordingly, as might be the case with a fenced plot. Animals which move around freely, prefer certain plants and even eat just parts of these plants very selectively. It is difficult to keep them in a place where the pasture is no longer tasty to them because then they just move on.



Photo 2: Picture of smallstock browsing and grazing (A. KARIM, IMG_0428.JPG)

Photo 2 provides an illustration that the general finding that animals on the open range are selective in what they eat not only needs to be specified in terms of plants or different parts of plants in different stages of growth. It also needs to be looked at separately for each species of animals. In spite of their general anatomical and physiological similarities, different species of ruminants do not eat the same things, if, like it is the case on the open range, they have the choice. They have different motor habits and food preferences. Here we see goats browsing a higher layer of the vegetation than sheep.

This volume basically consists of photographs of the herbarium, the pile of panels depicted in Photo 1. They are arranged in the alphabetical order of the Arabic names of the plants transcribed in Latin characters. It is followed by an index of the scientific names. Another list arranges the plants by families so as to provide some botanical classification at this level.

The purpose of collecting all this botanical information is to enable the researchers to observe closely what the animals they follow around on the open range eat and to name what they see. To illustrate this method, we have included two photographic documentations in the last part of this volume.

REFERENCES

- McCabe, Terrence J. 2004. *Cattle Bring Us to our Enemies: Turkana ecology, Politics, and Raiding in a Disequilibrium System*. Ann Arbor, Mich.: University of Michigan Press.
- Vayda, Andrew P., and Bradley B. Walters. 1999. 'Against Political Ecology.' *Human Ecology*, 27 (1): 197–79.

HERBARIUM

(AWAD ALKARIM)

MAKING OF THE HERBARIUM

The first step in making of the herbarium is to select the different plants. Then, you put a layer of paper on the herbarium frame followed by the particular plant and its various constituents (roots, stems, leaves and fruits) always bearing in mind the overall picture of that plant. This step is repeated with each plant.



Photo 1: Putting plants on layers of paper on the herbarium frame.

(A. ALKARIM, IMG_1565.JPG)

The second step includes the tidily pressing of these plants with the other part of the herbarium frame and keep them in that position for approximately 15 till 20 days. Put them in a shady place to dry.



Photo 2: Tidily pressing the plants.

(A. ALKARIM, IMG_1648.JPG)



Photo 3: Drying the plants.

(A. ALKARIM, PICTURE 058.JPG)

In the third step you open the frames and carefully take out the plants one after the other. Then, you transfer these plants to other frames on which you fix them properly.



Photo 4: Finished herbarium frames

(A. ALKARIM, 100.JPG)

Finally, you have to classify the plants according to their local, family, Latin or botanical scientific name(s) (according to Ahmed et al. 2005, Harrison et al. 1958, and Wickens 1991) and identify the district of collection, collection date, and the name(s) of the collector(s) as it is shown in the different charts.

SUDANESE PLANT NAMING

Sudanese people are well known for their significantly descriptive local plant names. They name plants with names either derived from the local environment, i. e. resembling a specific organ of an animal, or they choose the name to express a prominent morphological feature of the plant itself.

For example, they give the name:

- *Danabel'igil*, which means 'calf tail', to the tall grass (Latin: *Pennisetum ramosum* (Hochst.) Aschers & Schweinf) due to the fact that the inflorescence of this grass typically resembles a tail of a calf.
- *Danabel'agrab*, which means 'Scorpion tail' to the weed (Latin: *Heliotropium aegyptiacum*) whose inflorescence is curved and segmented exactly like a scorpion's tail.
- *Umm lebaina* to the weed (Latin: *Euphorbia aegyptiaca*) literary meaning milk secreting. The reason for this is the leaking of white sap, resembling milk, from any part of the plant that is cut off.
- *Abgangra* (Latin: *Echiochloa colona* (L.) Link), which means 'long neck', because the neck of this plant's inflorescence is as long as that of sorghum.
- *Abu'ariida* (Latin: *Desmodium dicotymum* (Klein) DC.) because of the leaflets of the compound leaf which are so long and flattened.
- *Umasabei'* or *Abuasabei'* (Latin: *Chloris gayana* Kunth.), which has an inflorescence in form of four or five fingers like the fingers of the human hand.
- *Direyiia* (Latin: *Merremia emarginata* (Burn.F) Hallier and *Evolvulus alsinoides* L.) which comes from the Arabic verb 'Yatadara' meaning more closer to. This plant grows close to ground with adventitious roots coming from the nodes.
- *Fartaga* or *Sifira* (Latin: *Crotalaria senegalensis* L.) because the fruit is full of air when pressed between fingers will make a sound. It is also named 'Sifira' because the inflorescence colour is yellow and in Sudan we use the word *Asfar* for the yellow colour.
- *Hanbuuk* (Latin: *Abutilon figarianum* Webb.). This plant has fruits just like a small balloon.
- *Hemeira* (Latin: *Corchorus tridens* L.), referring to the red colour in the leaves and the stem. In Sudan, we say 'Ahmar' for the red colour.
- *Fakha* (Latin: *Justicia palustris* (Hochst.) T. Anderson). The stem of this plant is hollow because of its inner groove. So it can easily break. If you say to somebody 'you are *Fakha*' you mean that he is weak.
- *Ankooj* (Latin: *Ischaemun afrum*) means strongly fixed to the ground by roots.
- *Irgeddam* (Latin: *Rhynchosia memnonia* (Del.) DC.), because the distribution of lateral branches resemble the venation of human blood vessels. Even the colour of these branches is red.

- *Danabelsabara*, which means ‘Squirrel tail’, to the grass (Latin: *Aristida adscensionis* L.). The grasses’ inflorescence typically resembles the tail of a *Sabara*, the local name for a squirrel. It is a small wild animal living in holes, under shrubs or trees.
- *Danabeltha’lab*, which means ‘Fox tail’, to the tall grass (Latin: *Aristida hordeacea* Kunth.). The inflorescence of this grass typically resembles a fox tail.
- *Lisaneltair* (Latin: *Amaranthus viridis* L.) which means ‘Bird tongue’ and refers to the similarly shaped leaves of this weed.
- *Sheelnima’ak* (Latin: *Bidens pilosa* L.), which means ‘Take me with you’. The fruits of this plant have hooks that adhere to any object passing nearby.

Sometimes a plant name was chosen to express the strong odour or scent (similar to curdled milk) exuding from the plant, e. g they give the name:

- *Abul offain*, which means nasty smelling, to the creeping herb (Latin: *Momordica charantia*). This nasty smell usually comes out from an *Abul offain* which is a wild animal living on eating small chickens. When surrounded by somebody, he simply exerts this nasty smell as a defence mechanism.
- The same naming approach had been applied to the leguminous fodder (Latin: *Lablab purpureous*). The local name is *Lubia afin* which means nasty smelling ‘lubia’.
- *Rihan* (Latin: *Ocimum americanum* L.) which means good smelling. It is a naturally grown wild aromatic plant emitting a very potent smell from its leaves and flowers. This potent odour is extracted for the purpose of manufacturing perfumes and sometimes a repellent for insects and mosquitoes

BOTANICAL SCIENTIFIC REFERENCE

- Ahmed, H. K., and E. I. Warrag. 2005. ‘Sudan Vegetation Cover Assessment, Using NOAA-AVHRR Data, for the Period between “1982–1999”.’ *Sudan Silva*, 11(1): 20–33.
- Harrison, M. N., and J. K. Jackson. 1958. *Ecological Classification of the Sudan*. Forest Bulletin 2. Forest Department Khartoum: 1–45.
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TEAM

The making of this Herbarium could be accomplished with the great support of the following team members:

University of Sennar, Faculty of Agriculture (Abu-Na'ama)

- Ahmad Hamid
- Awad Alkarim

Director of the Range Administrative Group, Sennar State

- Khaliifa Humari

Director of the Range Administrative Group, Blue Nile State

- Ahmad Ab Saas

PLANT IDENTIFICATION CHARTS

1-45



(A. ALKARIM, IMG_1745.JPG)

Plant Identification Chart 1

Local Name: Abanoos أبنوس

Family Name: Cycadaceae

Latin Name: *Dalbergia melanoxylon* Guill. & Perr.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1738.JPG)

Plant Identification Chart 2

Local Name: Abgangra أبتقرة

Family Name: Poaceae (Graminae)

Latin Name: *Echinochloa colona* (L.) Link

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1757.JPG)

Plant Identification Chart 3

Local Name: Abu'ariida أبو عريضة

Family Name: Papilionaceae

Latin Name: *Desmodium dicotymum* (Klein) DC.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1713.JPG)

Plant Identification Chart 4

Local Name: Abu Mruwa أبو مروة

Family Name: Asteraceae (Compositae)

Latin Name: *Vernonia prupurea* Schultz Bip.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1726.JPG)

Plant Identification Chart 5

Local Name: Anis أنيس

Family Name: Poaceae (Graminae)

Latin Name: *Sorghum puppureseresium* (Hochst.)

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1722.JPG)

Plant Identification Chart 6

Local Name: Anzora أنزورا

Family Name: Poaceae

Latin Name: *Hyparrhenia rufa* (Nees) Stapf

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1747.JPG)

Plant Identification Chart 7

Local Name: Banu بنو

Family Name: Poaceae (Graminae)

Latin Name: *Eragrostis aspera*

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1721.JPG)

Plant Identification Chart 8

Local Name: Boos/Ankojج بوس/آنكوج

Family Name: Poaceae

Latin Name: *Ischaemum afrum*

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1734.JPG)

Plant Identification Chart 9

Local Name: Dahaseer/Neela دهاسير/نيلة

Family Name: Papilionaceae

Latin Name: *Indigofera subulata* Pair

District: Blue Nile State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1763.JPG)

Plant Identification Chart 10

Local Name: Danabel'igil ضنب العجل

Family Name: Poaceae

Latin Name: *Pennisetum ramosum* (Hochst.) Aschers & Schweinf

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



Plant Identification Chart 11

Local Name: Danabelsabara ضنب الصيرة

Family Name: Poaceae (Graminae)

Latin Name: *Aristida adscensionis* L.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



Plant Identification Chart 12

Local Name: Direyiaا درعية

Family Name: Convolvulaceae

Latin Name: *Merremia emarginata* (Burm.F) Hallier

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1748.JPG)

Plant Identification Chart 13

Local Name: El Arkala الأركلا

Family Name: Convolvulaceae

Latin Name: *Ipamoea aquatica*

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1740.JPG)

Plant Identification Chart 14

Local Name: El Fakha الفخة

Family Name: Acanthaceae

Latin Name: *Justicia palustris* (Hochst.) T. Anderson

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1720.JPG)

Plant Identification Chart 15

Local Name: El Lukh اللخ

Family Name: Poaceae (Graminae)

Latin Name: *Dichanthium annulatum* (Forsk) Stapf

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1732.JPG)

Plant Identification Chart 16

Local Name: El Rizza الرزة

Family Name: Poaceae (Graminae)

Latin Name: *Rottboellia cochichinensis*

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1737.JPG)

Plant Identification Chart 17

Local Name: Eldanabaya الضنابية

Family Name: Poaceae (Graminae)

Latin Name: *Aristida adscensionis* L.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1731.JPG)

Plant Identification Chart 18

Local Name: فرطافة

Family Name: Papilionaceae

Latin Name: *Crotalaria senegalensis* L.

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1742.JPG)

Plant Identification Chart 19

Local Name: Guar قوار

Family Name: Papilionaceae

Latin Name: *Cyamopsis senegalensis* Guillem. & Perrott.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1752.JPG)

Plant Identification Chart 20

Local Name: Habeeel هبيل

Family Name: Combretaceae

Latin Name: *Combretum adnogonium* Steud. ex A. Rich

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1749.jpg)

Plant Identification Chart 21

Local Name: Hanbuuk هنبوك

Family Name: Malvaceae

Latin Name: *Abutilon figarianum* Webb.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



Plant Identification Chart 22

Local Name: Hemeira حميرا

Family Name: Tiliaceae

Latin Name: *Corchorus tridens* L.

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1765.JPG)

Plant Identification Chart 23

Local Name: Hrab Hawsa حراب هوسا

Family Name: Acanthaceae

Latin Name: *Acanthospermum hispidum* Hochst.

District: Sennar State

Collection Date: October 2010

Collected & Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1744.JPG)

Plant Identification Chart 24

Local Name: Humaid حميض
Family Name:
Latin Name: *Lannea humilis* Hochst.
District: Blue Nile State
Collection Date: October 2009
Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1719.JPG)

Plant Identification tag
 Family Name: Papilionaceae
 Latin Name: *Rhynchosia memnonia* (Del.) DC.
 Local Name: عرق الدم
 District: Blue Nile State
 Collection Date: 10/01/2009
 Collected & Classified by: A. H. Hamid and A. E. Alkarim

Plant Identification Chart 25

Local Name: Irgeddam عرق الدم

Family Name: Papilionaceae

Latin Name: *Rhynchosia memnonia* (Del.) DC.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1743.JPG)

Plant Identification Chart 26

Local Name: Kakamoot كاكاموت

Family Name: Mimosaceae

Latin Name: *Acacia campylacantha* Hochst. ex. A. Rich

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1768.JPG)

Plant Identification Chart 27

Local Name: Kawal كوال

Family Name: Caesalpiniaceae

Latin Name: *Cassia tora* L.

District: Sennar State

Collection Date: October 2009

Collected & Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1715.JPG)

Plant Identification Chart 28

Local Name: Klytoria كليتوريا

Family Name: Papilionaceae

Latin Name: *Clitoria ternata* L.

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1733.JPG)

Plant Identification Chart 29

Local Name: Lisaneltair لسان الطير

Family Name: Amaranthaceae

Latin Name: *Amaranthus viridis* L.

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1773.JPG)

Plant Identification Chart 30

Local Name: Molokhya ملوخية

Family Name: Tiliaceae

Latin Name: *Corchorus olitorius* L.

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1771.JPG)

Plant Identification Chart 31

Local Name: نال

Family Name: Poaceae

Latin Name: *Cymbopogon nervatus* (Hochst.) Chiov.

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1766.JPG)

Plant Identification Chart 32

Local Name: Phlibisara فلبيسارا

Family Name: Papilionaceae

Latin Name: *Vigna tribulata* L.

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1728.JPG)

Plant Identification Chart 33

Local Name: Ramtoug رامتوك

Family Name: Asteraceae

Latin Name: *Xanthium brasiliicum* Vell.

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1758.JPG)

Plant Identification Chart 34

Local Name: Rihan ریحان

Family Name: Labiatea

Latin Name: *Ocimum americanum* L.

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1751.JPG)

Plant Identification Chart 35

Local Name: Sahab صهبا

Family Name: Combretaceae

Latin Name: *Anogeissus leiocarpa* Guill. & Perr.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1774.JPG)

Plant Identification Chart 36

Local Name: Siada **سيدة**

Family Name: Cyperaceae

Latin Name: *Cyperus rotundus* L.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1714.JPG)

Plant Identification Chart 37

Local Name: Soreeb سوريب

Family Name: Caesalpiaceae

Latin Name: *Cassia occidentalis* L.

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1770.JPG)

Plant Identification Chart 38

Local Name: Taber تير

Family Name: Convolvulaceae

Latin Name: *Ipomoea cordofana* Choisy

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1754.JPG)

Plant Identification Chart 39

Local Name: Um Dofair أم دفير

Family Name: Poaceae (Graminae)

Latin Name: *Ophiuros papillosus* Hochst.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1723.JPG)

Plant Identification Chart 40

Local Name: Um Fraw أم فرو

Family Name: Poaceae (Graminae)

Latin Name: *Chloris virgata* Sw.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1761.JPG)

Plant Identification Chart 41

Local Name: Um Mamleiha أم ماملجة

Family Name: Poaceae (Graminae)

Latin Name: *Dinebra retroflexa* (Vahl.) Panz.

District: Sennar State

Collection Date: October 2010

Collected and Classified by: Ahmad Hamid and Awad Alkarim



Plant Identification Chart 42

Local Name: Um Nejajjeera أم نججيرة

Family Name: Papilionaceae

Latin Name: *Alysicarpus glumaceus* (Vahl.) DC.

District: Sennar State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1760.JPG)

Plant Identification Chart 43

Local Name: Um Regeyga أم رقية

Family Name: Euphorbiaceae

Latin Name: *Phyllanthus maeraspatensis* L.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



Plant Identification tag
Family: *Plantaginaceae*
Latin Name: *Thunbergia annua* (Hochst.) ex. Nees
Local Name: *Um Rekaibat* أم ركيبات
District: *Blue Nile State*
Collection Date: *10/2009*
Collected/Classified by: *A. H. Hamid and A. E. Elmal*

Plant Identification Chart 44

Local Name: Um Rekaibat أم ركيبات

Family Name: Acanthaceae

Latin Name: *Thunbergia annua* (Hochst.) ex. Nees

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



(A. ALKARIM, IMG_1746.JPG)

Plant Identification Chart 45

Local Name: Um Shedayda أم شديدا

Family Name: Malvaceae

Latin Name: *Sida alba* L.

District: Blue Nile State

Collection Date: October 2009

Collected and Classified by: Ahmad Hamid and Awad Alkarim



Photo 5, 6 (A. ALKARIM, 101, 098.JPG)



Photo 7: Günther Schlee presenting the Herbarium and the plant identification charts to the Dean of the Faculty of Agriculture (Abu-Na'ama), Dr. 'Abdallah Tibin, University of Sennar, March 2012. (A. ALKARIM, 099.JPG)

INDEX OF BOTANICAL SCIENTIFIC NAMES

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PLANT DIVERSITY AND PASTORALISM: A PICTORIAL REPORT

Field Notes Source: Awad20121022.docx

(WRITTEN BY GÜNTHER SCHLEE ON THE BASIS OF
INFORMATION GIVEN BY AHMED HAMID AND AWAD ALKARIM)

TUESDAY, NOVEMBER 20, 2012 – ABU-NA'AMA

Awad collected some data on October 22. He was in company of Dr. Ahmad Hamid. They visited a camp of sheep and goats belonging to At-Taj az-Zeen from Amarna. The location was west of Ajuula, Abu-Hujaar Locality. The herder is the son of the owner, by the name of An-Na'im. The pasture plants included:

- *Danab al-ejil*
- *Tabar*
- *Di'irriyya*
- *Difra*
- *Adaar*

Tabar and *difra* appeared to be preferred by the smallstock

Cross References: Waypoints Awad20121022.doc

No specific descriptions of the 19 waypoints have been made. They reflect the movements of the herd in the time interval of three hours after *fatuur* (the time on the pictures is CET; one hour has to be added), during the visit by the researchers.

Awad20121022



Photo 1: Sheep eating *di'irriyya*.

(A. ALKARIM, DSCF0001.JPG)



Photo 2, 3: *Di'irriyya*, sheep eating *di'irriyya*. (A. ALKARIM, DSCF0003, DSCF0004.JPG)



Photo 4: *Tabar* (broader leaves) and *adana* (small, round leaves). The long, narrow leaves belong to a toxic plant, *umm labana*. (A. ALKARIM, DSCF0005.JPG)



Photo 5: Sheep eating *adana*. Also on this picture: *danab al-ejil*, *fakha*. (A. ALKARIM, DSCF0006, DSCF0007.JPG)

Photo 6: The many tall stalks of *fakha*, the softer parts of which have been bitten off, show that of this plant only the tip is eaten.

Photo 7: Sheep eating *tabar*.Photo 8: Sheep eating the top parts of *fakha*.Photo 9: *Danab al-ejil, tabar, fakha*Photo 10: Sheep eating the top parts of *fakha*.

Photo 11 (A. ALKARIM, DSCF0008, DSCF0009, DSCF0011, DSCF0012, DSCF0013.JPG)

The owner of the herd, Awad Hassan, (holding a GPS device belonging to the team of researchers) and his brother. Two days before the researchers' visit, the brother had smeared himself with the poisonous milk of the *umm labana* ("mother of milk", "the one with milk") plant to appear sick. The symptoms of exposure to this substance, a swollen face and an irritation of the eyes, look like symptoms caused by a snakebite. He did not want to stay with the herd and wanted to be sent back to the village. He had dropped out of school and was neither happy with the alternative of going back to school nor herding the animals.



Phot 12: Sheep seeking shade under a shrub.

(A. ALKARIM, DSCF0014, DSCF0017, DSCF0016, DSCF0018, DSCF0019.JPG)



Photo 13, 14: Milking. The herders want to prepare tea for the researchers.



Photo 15, 16: Sheep eating *difra*.



Photo 17: *Tabar*



Photo 18:: One of the herders standing in a field of sorghum.



Photo 19: Awad Hassan in the vicinity. They all water their animals at the same pond.



Photo 20: Herder smoking

(A. ALKARIM, DSCF0021 – DSCF0024.JPG)



Photo 21: Sheep eating sorghum leaves.



Photo 22: Sheep eating *ankuuj*.



Photo 23: Sheep eating top part of *fakha*.



Photo 24: Sheep eating *ankuuj*.



Photo 25: Sheep eating *ankuuj*.

(A. ALKARIM, DSCF0025, DSCF0030, DSCF0031, DSCF0036, DSCF0041.JPG)



Photo 26: Sheep to be fed with sorghum stalks.



Photo 27: Sheep eating *fakhra* and remainders of sorghum.

Photo 28: Sheep eating weed grasses between sorghum stalks.



Photo 29: Sheep eating *reehaan*.

(A. ALKARIM, DSCF0048, DSCF0047, DSCF0051, DSCF0050, DSCF0053.JPG)



Photo 30: Ather herders from Barankawa, from right to left: Ijeili Yuusif, ‘Abdallah Musa Idriis, Mohamed Ibrahim. Their herd belongs to Ibrahim Faki Mohamed.

(A. ALKARIM, DSCF0055.JPG)



Photo 31: Sheep eating *hanbouk*.

(A. ALKARIM, DSCF0001–DSCF0005.JPG)



Photo 32: Sheep eating *difra*.



Photo 33: The same as Photo 34, 35.



Photo 34, 35: Sheep eating *difra*. The *fakha* stalks, bare and with the top parts bitten off, show that the area has been grazed before.



Photo 36: Goats eating hard stalks which would not be suitable for cattle. As to the type of animals, no colour preferences or particular breeds of goats are recognizable.



Photo 37: Sheep eating *difra*.



Photo 38: Sheep eating *tabar*.



Photo 39: Goat eating top of *danab al-ejl*.

(A. ALKARIM, DSCF0006–DSCF0009)

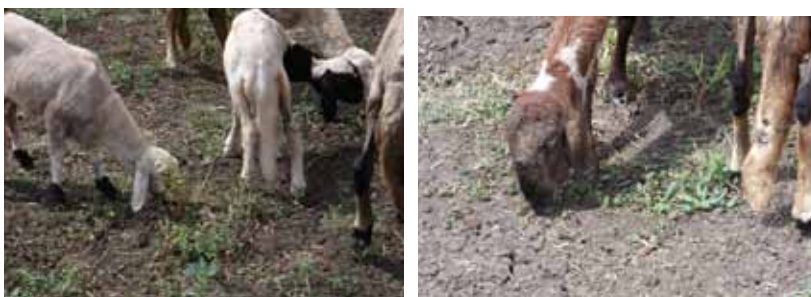


Photo 40, 41: Sheep eating *di'irriyya*.



Photo 42: Goat eating *di'irriyya*.



Photo 43: Herdboy (A. ALKARIM, DSCF0014, DSCF0011, DSCF0015, DSCF0016.JPG)



Photo 44, 45, 46: The pictures show that also the sheep are of mixed origin.
(A. ALKARIM, DSCF00187–DSCF0019.JPG)



Photo 47

(A. ALKARIM, DSCF0021, DSCF0022, DSCF0024, DSCF0023.JPG)

A hired herder, a Mbororo boy from Damazin. His name is Adam Ali. His employer is Ibrahim Hassan from Abu-Hujaar, a Rufa'a. He was sick and had to be taken on camelback to Abu-Hujaar. His family is in Abu-Hujaar and his brother will replace him.

Photo 48, 49, 50: Sheep eating *di'irriyya*.



Photo 51: Note the water point, a pond, in the background. The rider carries *tabar* for animals kept in the village.
(A. ALKARIM, DSCF0025, DSCF0026.JPG)



Photo 52: The rider plus Ibrahim Hassan.



Photo 53: A convenient source of *tabar* in easy reach. (A. ALKARIM, DSCF0027.JPG)

Report about Awad Hassan ‘cattle herder’ from Abu-Hujaar (Abusurwal – Rufa’a tribe). The herd belongs to his brother Ibrahim Hassan who has almost more than 10 herds of cattle, sheep and goats. He rent more than 15 herders from different tribes besides his brothers.



Photo 54

(A. ALKARIM, 001, 002.JPG)

Elhadi Balal accompanied us from Ajuula to the range pasture where we met Awad Hassan, the brother of Ibrahim Hassan from Rufa’a tribe near the water pond west of Ajuula.



Photo 55: View of the natural water pond which looks like a muddy shallow area.



Photo 56: Cattle moving away after drinking from the remains of water and Elhadi looking to the *hafir* whose water resource will only last for two more days.



Photo 57: The herder went in front of the cattle after drinking and the cattle followed him to range.

(A. ALKARIM, 003-005.JPG)



Photo 58: Cattle beginning to eat *danab al-ejil* after watering.



Photo 59, 60, 61, 62: Cattle eating *ankuij* and *adaar* (wild sorghum)
(A. ALKARIM, 006, 007, 008, 010.JPG)



Photo 63

(A. ALKARIM, 009.JPG)



Photo 64: Cattle eating *difra*

(A. ALKARIM, 011–014.JPG)



Photo 65: Cattle eating *difra*, *danab al-ejil* and *ankuuj*. The red cow belongs to Butana breed.



Photo 66, 67: Cattle eating *difra*, *danab al-ejil* and *ankuuj*.



Photo 68: Cattle eating *difra*, *danab al-ejil* and *ankuuj*. (A. ALKARIM, 015-018.JPG)



Photo 69, 70: Cattle eating *difra*, *adaar* and *ankuuj*.



Photo 71: Cattle eating *difra*, *aadar* and *ankuuj*. Head of *aadar* is partly eaten.



Photo 72: *Abu'ariida* with broad leaves and *ankuuj* with narrow leaves.
(A. ALKARIM, 015-021.JPG)



Photo 73: Heifers eating *ankuuj*. Also, you see a young black calf and a young spotted heifer which are deviated from the normal grey color of Kenaana cattle.



Photo 74: Cattle eating *adaar* (wild sorghum). Heads of *aadar* are clear.



Photo 75, 76: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and *danab al-ejil*.



Photo 77: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and *danab al-ejil*. Here appear the typical kenana breed replacing sire.
(A. ALKARIM, 022-026.JPG)



Photo 78, 79: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and *danab al-ejil*.



Photo 80, 81: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *dī'irriyya*, *tabar*, *reehaan* and *danab al-ejil*.



Photo 82: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *dī'irriyya*, *tabar*, *reehaan* and *danab al-ejil*. Younger heifer has lameness in her right rear leg.
(A. ALKARIM, 027-031.JPG)



Photo 83: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *dī'irriyya*, *tabar*, *reehaan* and *danab al-ejil*.



Photo 84: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and *danab al-ejil*. *Adaar* is prominent in this view.

(A. ALKARIM, 032-036.JPG)



Photo 85, 86: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and *danab al-ejil* which is prominent in this view.



Photo 87, 88: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and *danab al-ejil* which is prominent in this view.



Photo 89: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya* and *danab al-ejil* which is prominent in this view.



Photo 90: Cattle eating mixture of pasture plants like *adaar* (wild sorghum), *Abu'ariida*, *di'irriyya*, *tabar*, *reehaan* and others. (A. ALKARIM, 037-039.JPG)



Photo 91: Cattle eating *adaar* (wild sorghum).



Photo 92, 93: Cattle eating mixture of *adaar* (wild sorghum) and *ankuij*.



Photo 94: Cattle eating *adaar* (wild sorghum).

(A. ALKARIM, 040-043.JPG)



Photo 95: Cattle eating *adaar* (wild sorghum).

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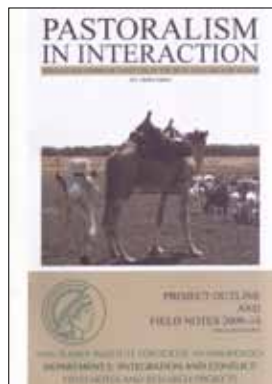
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