



Hunt Institute for Botanical Documentation  
5th Floor, Hunt Library  
Carnegie Mellon University  
4909 Frew Street  
Pittsburgh, PA 15213-3890  
Telephone: 412-268-2434  
Email: [huntinst@andrew.cmu.edu](mailto:huntinst@andrew.cmu.edu)  
Web site: [www.huntbotanical.org](http://www.huntbotanical.org)

The Hunt Institute is committed to making its collections accessible for research. We are pleased to offer this digitized item.

*Usage guidelines*

We have provided this low-resolution, digitized version for research purposes. To inquire about publishing any images from this item, please contact the Institute.

*About the Institute*

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

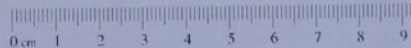
Broom corn. *Sorghum dura*. Cultivated in America  
to make brooms the grains being used ~~to make~~ as  
food for poultry. A species of this grass the  
*Holcus saccharatus* a native of China abounds in sugar  
This grass is generally known by the name of Sorgho.  
It has been used from time immemorial by the  
inhabitants of China, who extract sugar from it.  
The London Agricultural Association recommend  
its introduction into France to take the place of  
beet-root. They state that it is richer in sugar than  
any known plant except the true Beet-root contains  
from 8 to 10 per cent of sugar. The Sorgho from 16 to 20  
per cent from which about 8 per cent of pure alcohol can  
be obtained. The refuse is said to be excellent food for  
cattle. The plant grows rapidly + does not require  
irrigation. (Dr. Lere's dictionary of Arts Manufactures & Mining)



General Botany Notes.  
Agnes Robertson  
Sept 17<sup>th</sup> 1895



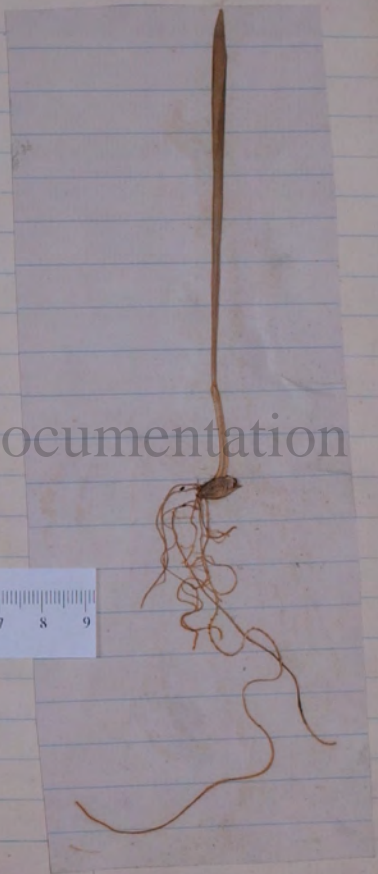
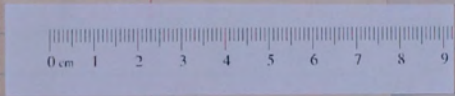
—proceeds  
deducting



Digitized by Hunt Institute for Botanical Documentation



Taproot

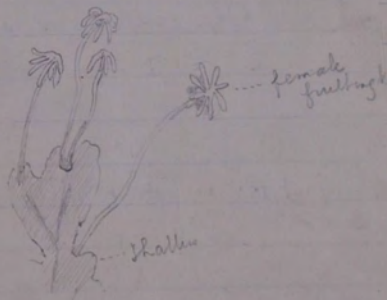
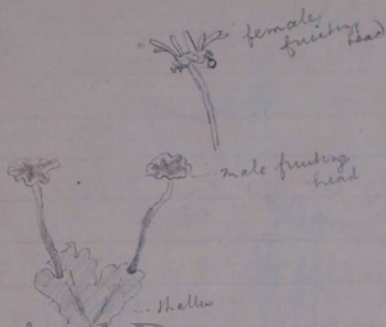


secondary root

Digitized by Hunt Institute for Botanical Documentation

*Lycopodium clavatum*, Club moss  
Sent from N. Wales by Betty Lee

*Marchantia Livers*



Digitized by Hunt Institute for Botanical Documentation

Dear Agnes. I am at  
Westmead today. Alice's  
house: & we have been  
in to the green house &  
found these things we  
thought you w<sup>d</sup> like.  
The Aritaberos (have  
I spelt it right?) are  
interesting. The red one  
is a spot. It was like  
this. There was a plant  
of white & a plant of  
that rather terra-cotta shade  
of scarlet - each with their  
efficient shaped leaves: &  
flowers somewhat differ-  
in shape. From the seed of the  
white - came this red one - an



entirely different colour  
from the ordinary coloured  
ones. It has the leaves  
the shape of the coloured  
& the shape of the flower  
is the same as the white  
shape. I suppose the bees  
had been at work.

This *Euphorbia* has Alice  
says) some peculiarity in  
it. She ~~thinks~~ thinks some-  
thing to do with the honey trap,  
but she does not know what.  
One *Poinsettia* is a *Euphorbia*  
too the gardener says.

Alice has tied the *Arbutus*  
together with their own leaves.

Digitized by Hunt Institute for Botanical Documentation

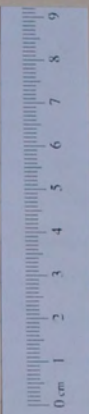
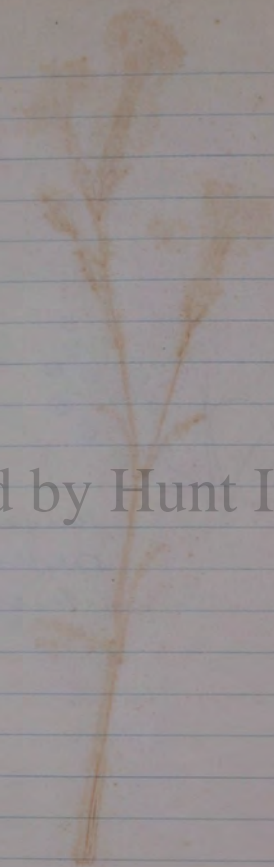


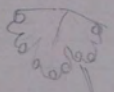
*Piece of acacia branch showing*

*5 phyllodes*

*Bought in London Mar 21, 96 by W. W. Katt*

Digitized by Hunt Institute for Botanical Documentation



  
water drop  
young celery  
leaf  
Apr 5, 93  
10.4 AM

Flowers from *Helianthus*  
*Parthenium* <  
*Chrysanthemum* <  
(Scroph)  
*Guaiacum* <  
*Syringa* <

Botany

Agnes Robertson

Summer Term 1897

(Vineo's Student Text Book of Botany)

Strap

Part II

The protoplasmic unit is an "energid"

An aggregate of energids within one cell wall (e.g. in Vaucheria) is a "coenocyte"; from KOINOS = common &amp; KYTOS = vessel

There are also some true cells which are multinucleate, e.g. the leaf parenchymatous cells of certain plants, Solanum etc., from being uninucleate become multinucleate by direct division or fragmentation of the nucleus. Coenocytes & "multinucleate cells" are distinguished thus:— The first are either originally multinucleate or become multinucleate at a very early stage, & the second only become multinucleate at quite a late period.

A "syncyte" (from SYZYGOSIS = blending) is a structure formed by the fusion of fully developed cells.

A body consisting of physiologically independent structural units is called a ~~cell~~ colony (κοινός ἀναμνηστικός life)

Notes of Lesson May 27.97

There are two theories about the cell wall; it ~~is~~ <sup>is not</sup> either of dead material, or, as Sir Arthur Thomson thinks, of living protoplasm.

Cytoplasm = pure protoplasm

Protoplasm = all that the cell has present in it e.g. chlorophyll, granules etc.

Huxley's definition of protoplasm is:-

"The physical basis of life"

Theories about protoplasm:-

- 1) ~~some~~ <sup>separate</sup> fibrils embedded in jelly
- 2) grains " " "
- 3) network of fibrils " " "

"Brüschli's foam". Brüschli obtained a substance with many of the characteristics of protoplasm by dissolving  $K_2CO_3$  in dil. olive oil

Cytoplasm grows by accretion, cell-wall by  
intercalation: growth one of the signs of life

- Movement:- (1) By cilia  
(2) By pseudopodia  
(3) Streaming motion  
(4) Swarming motion (water net)

hyaline from  $\chi\alpha\lambda\acute{\alpha}\nu\omicron\varsigma$  = glassy  
karyoplasm from  $\kappa\alpha\rho\alpha$  = do set in nucleus  
pyrenate

leucine (material of tubercles in nucleus)  
from  $\lambda\epsilon\upsilon\kappa\omicron\varsigma$  = a flux in the end

paralamin = semi fluid clear ground  
substance of nucleus, from para = beside  
&  $\lambda\epsilon\upsilon\kappa\omicron\varsigma$  = a flux in the end

centrosome (from  $\sigma\tau\epsilon\rho\omicron\mu\epsilon\delta$ ) = central body

$\lambda\epsilon\upsilon\kappa\omicron\varsigma$  = white

"Amyloplastic" function of starch granules  
i.e. the power of producing starch grains  
from  $\alpha\mu\epsilon\lambda\omicron\varsigma$  = a cake of fine meal



cell from pulp of apple

Digitized by Hunt Institute for Botanical Documentation

~~Pat~~

Notes for Tracy

- ✓ Unicellular alga (drawing of the body to be cut out)  
Yeast. (space to be left for a drawing to be  
copied from note book of school)
- ✓ Marchantia (Drawn in separate piece  
to be cut out)
- ✓ L<sup>ulu</sup>unaria (Spigillum to be placed & drawn  
for Potamo in E. standing  
morning)
- ✓ Moss *Ceratophyllum* (Drawing cut at  
sclerophyllous / drawing of the bulb  
bulb / stem & rhizome)
- ✓ corn  
<sup>Potato</sup>  
Dentaria Bullbils
- ✓ Celanderia
- ✓ ~~Asplenium~~  
~~Adiantum~~
- ✓ ~~Potato~~
- ✓ Fern
- ✓ Stonewort



"In Sept. of last year I bought for  
Mendocino some plants of  
*Commersonia polythera*. These I kept in  
a humidor & during the autumn  
"winter buds" became detached & sank  
to the bottom of the glass.

Each of these  
1922  
These "Winter buds" is pocket  
shaped & in the hollow the next  
year shoot is already laid down - of  
course, as a minute structure whose  
development I see and can only be seen  
above the closely adorning edge of the  
pocket. These detached winter  
buds sink because their cells,  
even those of the epidermis, develop  
large starch grains which are crowded  
together & liberally fill up the  
spaces of the cells. On Jan 10 I  
took out 2 of these winter buds  
& placed them in another humidor  
on the kitchen mantelpiece

where they would be sure of plenty  
of warmth. This was to see whether  
they could be induced to pass as  
if their resting stage under  
conditions of warmth. Even though it  
was so early as January, in a few  
days (I think was on Jan 13) I observed  
that the smaller of the two winter  
buds had risen to the surface.  
I did not look at the duckweed again  
till Jan 16. At that time I saw that  
there were on the surface 1 bud the  
larger one had developed two & the  
smaller one root, & that in each  
case the young plant which was  
white & cottony had begun to  
proceed from the buds. The larger  
one which had risen to the surface  
later did not float quite at the  
top of the water. On Jan 17 I  
observed that the smaller bud



reproduction of the celeriac is  
by the underground roots,  
which of pieces put in easily  
give rise to new plants

Mr. J. Bequith, author of the *Handbook of the*  
"The proliferous state of this variety of  
*Dicranum Scoparium* occurs now &  
again in abnormal seasons. I have never  
found this variety, which is usually  
densely tufted in fruit, as it is an  
abundant plant on our heathlands.  
I assume that the proliferous habit  
has much to do with the perpetuation  
of the plant.



Digitized by the Institute of Botanical Documentation