APPENDIX 1

Morphological observation of the biological material, photos and figures

1.1. Leaf classification according to their morphology and arrangement.

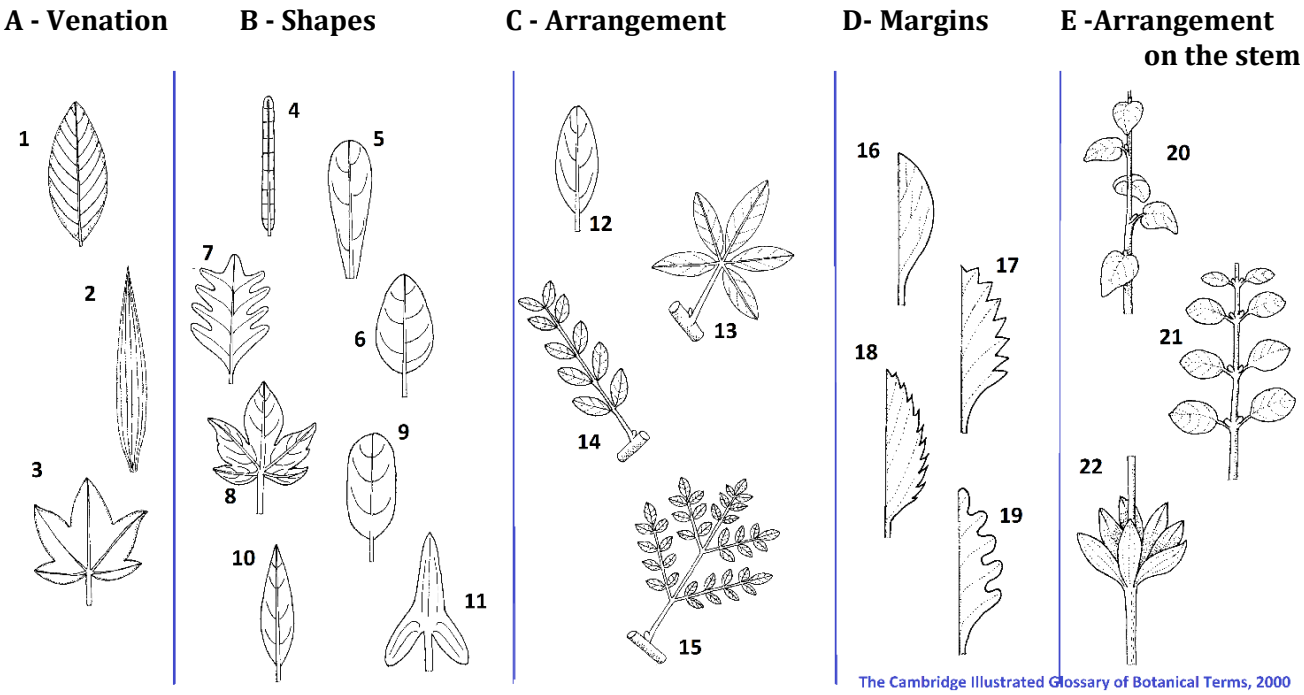


Figure Legend for Leaf morphology and arrangement

A - Venation	B - Shapes	C - Arrangement	D - Margins	E - Arrangement on the Stem
1 – Pinnate	4 – Linear	12 - Simple	16 - Entire	20 - Alternate
2 – Parallel	5 – Oblanceolate	13 – Palmately compound	17 - Dentate	21 - Opposite
3 – Palmate	6 – Ovate	14 – Pinnately compound	18 - Serrate	22 - Whorled
	7 – Pinnatipartite	15 – Bipinnately compound	19 - Lobed	
	8 – Palmately lobed			
	9 – Oblong			
	10 – Lanceolate			
	11 – Sagittate			

1.2. Trichome classification according their morphology and arrangement

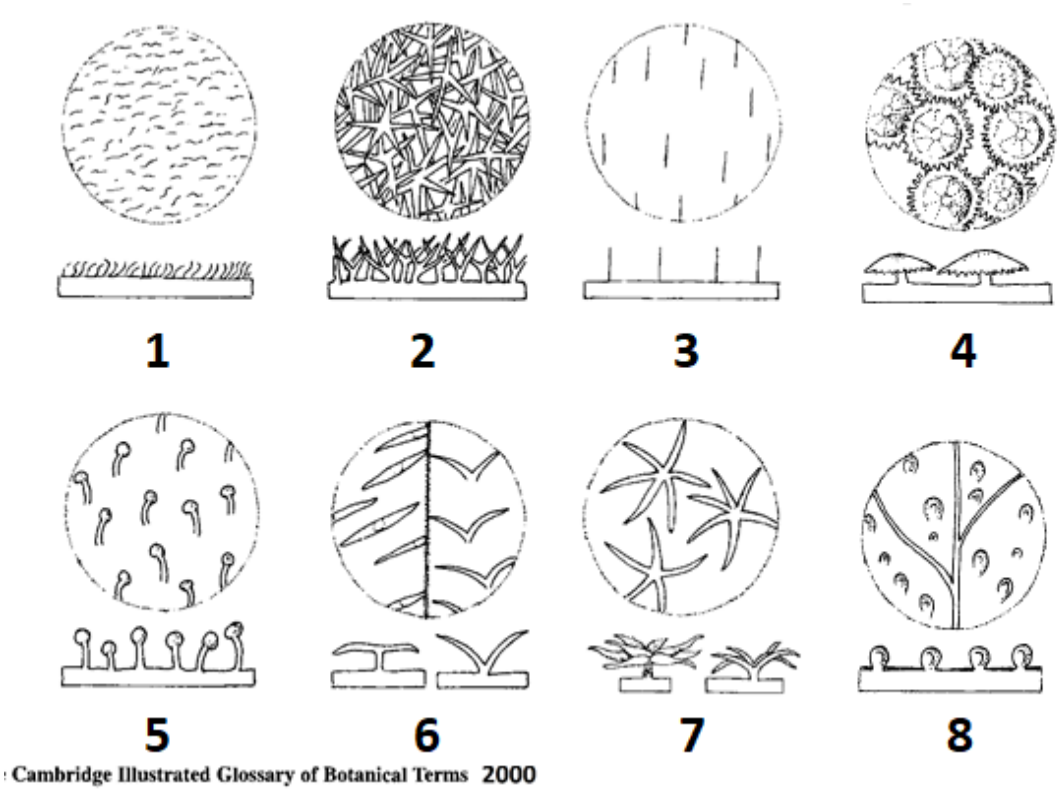


Figure Legend for Trichome classification

Arrangement	Shape
1 – Pubescent	5 – Glandular
2 – Pannose	6 – Bifid (2 types)
3 – Hirsutullous	7 – Stellate (2 types)
4 – Peltate	8 – Postulate

1.3. Cupule classification according its morphology.

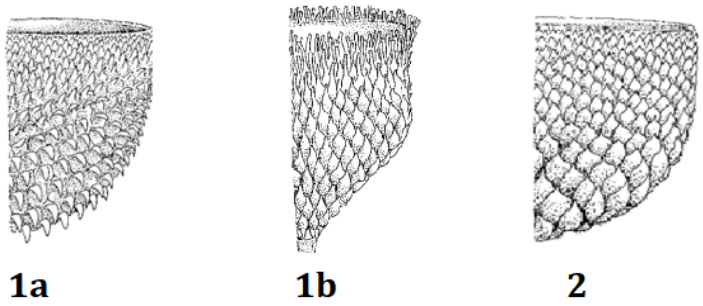


Figure Legend for cupule classification

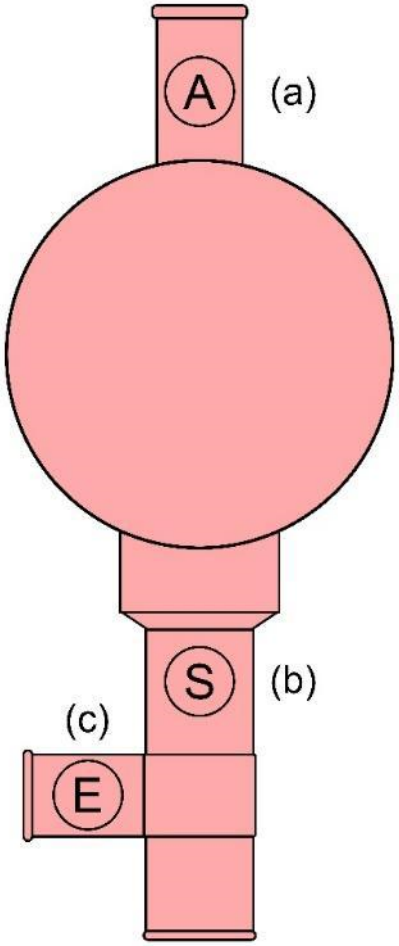
1a, 1b – protruding scales; 2 – fused scales. Flora Iberica 2000.

APPENDIX 2

PIPETTING

Pipette safety instructions

- Mouth pipetting is forbidden!
- Insert the top of the pipette in the bottom of the pipette filler carefully so as not to break the glass pipette.
- Do not allow the liquid to be drawn into the bulb.



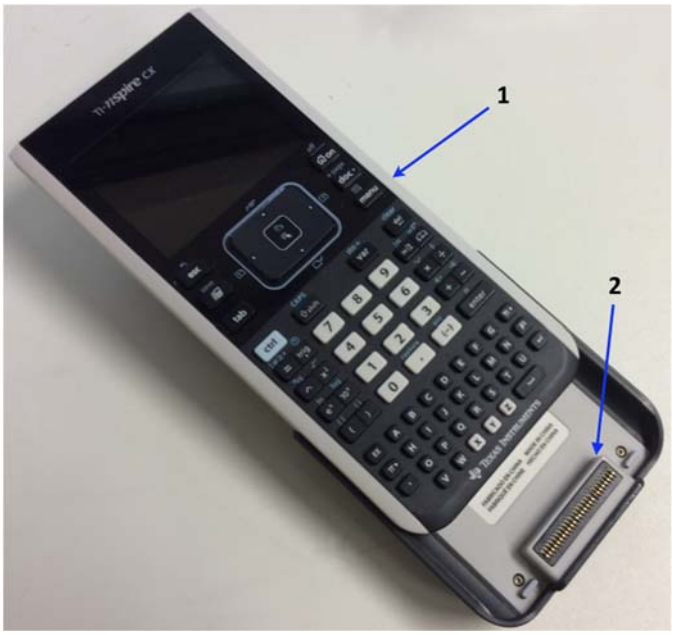
Pipette filler bulb: (a) Air valve (expels air from the bulb), (b) Suction valve (draws solution into the pipette), (c) Empty valve (drains solution from the pipette).

APPENDIX 3

Ti-Nspire

3.1. Collecting data with the data logging Lab Cradle interface connected to a calculator with the TI-Nspire CX Software.

1. Connect the calculator to the interface



1 – Calculator

2 – Interface

2. Turn on the calculator.

1 – Switch On/Off

3.2. Instructions for Vernier Colorimeter

The Vernier Colorimeter is designed to determine the concentration of a solution by analysing its colour intensity. The Colorimeter measures the amount of light transmitted through a sample at a user-selectable wavelength.

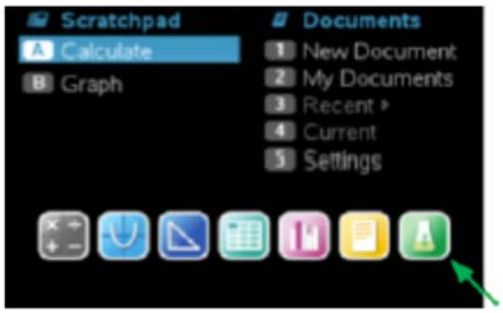
There are two models: **1 -** 2000-2014 model and the **2 -** 2014-current model.

Using the Colorimeter

The Colorimeter is easy to use and maintain. Simply connect it to your data collection interface (TI graphing calculator), configure your software (Vernier LabPro®), and you are ready to make measurements. For best results, let the system stabilize at the desired wavelength for 5 minutes prior to calibration or data collection.

General procedure to follow when using the Colorimeter

1. Connect the Colorimeter to the interface in ch1 or ch2 or ch3.
2. Turn on the TI Nspire
3. Use the cursor with the Touchpad and press the icon 



4. The software will identify the colorimeter and load a default data collection setup.

5. Press the < or > button on the Colorimeter to select the correct wavelength setting for your experiment (430 nm, 470 nm, 565 nm, or 635 nm).
6. Calibrate the Colorimeter. **Note**: The Colorimeter needs to be powered about 5 minutes before calibrating. One of the four green wavelength indicator lights will be turned on when it is powered.
   a. Open the Colorimeter lid.
   b. Insert a cuvette, for your blank cuvette (100% transmittance or 0 absorbance). **Important:** Line up one of the *clear* sides of the cuvette with the arrow at the *top* of the cuvette slot. Close the Colorimeter lid.

   c. Next, press the CAL button to begin the calibration process. Release the CAL button when the red LED begins to flash. The absorbance should now be 0.00 or 0.01.
   d. When the LED stops flashing, the calibration is complete and your unit is ready to collect data.
7. Collecting data.
   a. Place the cuvette with a sample into the Colorimeter cuvette slot. **Important:** Line up the side of the cuvette with an arrow with the arrow at the *top* of the cuvette slot.
   b. Read the absorbance value

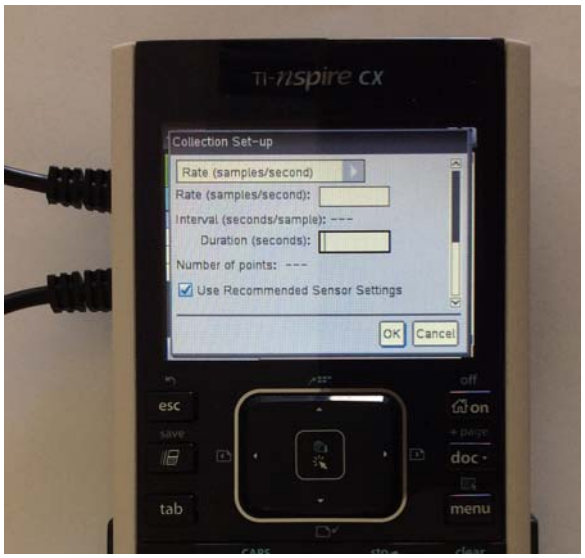
3.3. Instructions for the temperature sensors

1. Connect the sensor / sensors to interface. Use the first input channels.

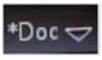
2. The program automatically detects the sensor/sensors. It starts up, by default, in **monitoring mode**, as shown in the following image:

3. To move from the monitoring mode to the **acquisition mode** you have to click on button  using the central touchpad. Data will start to be saved.

4. To adjust the sampling rate and define the acquisition duration, click on  and make the appropriated choices.



5. The collected data can be visualized in a meter by selecting  , in a plot by selecting  or in a table  .

6. If you want to save your data use the popup  above the displaying data window, choose File and Save or Save as.

7. You can read data points in a plot by clicking on the graph to position the cursor at the desired point.