



⇒B HFC 8I uÈC

5g'd'UbHġ Ygh-c' dcf' ĥcXU dUfH/ g-c' Uġ [ fUbXYg' Zcfa UĤcfUġ' XY' dUġU] Ya "5 Y' ]ghbWU\i a UbUXdYbXYXYU[i a UġYgd]MNgj Y] YUġYU Xca Yġ]W -c' XY'Uġ'Zc] YġYbWU' dUfUc' YġUWYWġa Ybĥ' XġVj] ]'nU" Yġġ ]bÜ YbWU bXc' X]fYUġa Ybh'Ua UbY]fUXc' \ca Ya 'j j Y' YXY'fUbgZcfa Uf' gY' i b]j Yfg" B -c' f dcf' UWġz' Ybh-c'zei Yc' a i bXc' j Y] YU' UfU' Ĥbĥc' UUh'b, -c' Xc' gY' \i a Ubc" 5dYġf' XU Ybcfa YX]j YfgXUX'j Y] YU' bUĥj U Xc' 6fUġ' z' YbWbh'fUġa cg' UġbXU i a U' ]h'fU' h'fUa i ]ĥc' dUfWYa 'gghYa zh]W j Y] YU' bc' dUġ'



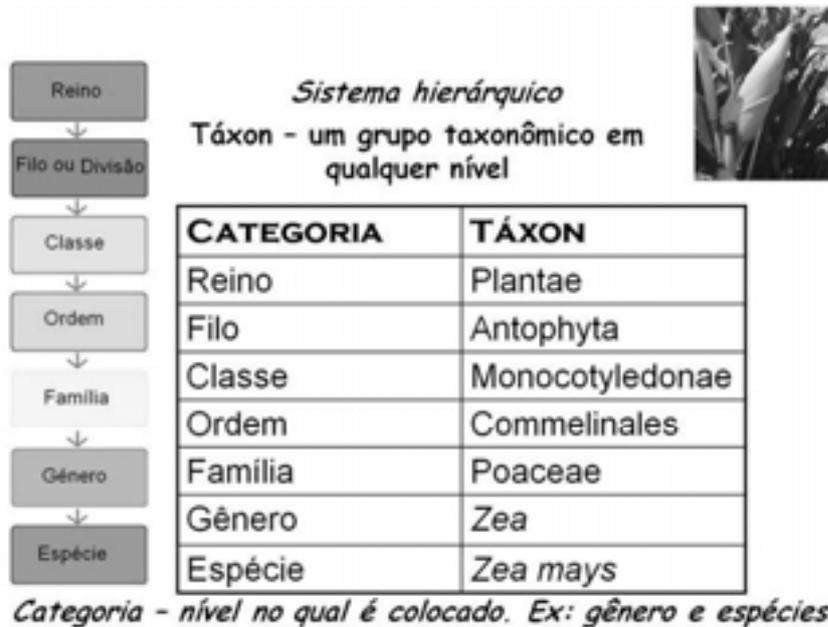
: ]]i fU%ġ' 5' [i a UġY ]X bWġgXUX]j YfgXUXY'cf[ U]ġa cg'



cg'fYg] j cg'U] Uçza Uçei YfYU]Hã UY'c'i, ~c'g'Z]XUdcf YggYg] fi dcg  
 U'`c]b[c'Xc' hã dc"C flã c'XUG]ghYa zh]Wei YgY'c'WdUXUWgg]UW ~c'  
 dos seres vivos e da nomenclatura designa-se por Taxonomia. A Taxono-  
 a ]UfU]Xbh]UW ~c'zUuf]M], ~c'XY'bcã Yg'YUWgg]UW ~c'XU'g'Yg]M]g'  
 5'G]ghYa zh]Wf'c'Yg]Xc'XUXj YfgXUXYV]c'ÇE]WYg U\]g]ÇE]UY'c!  
 ì hj U'v' UW]bW]Uei YfUUXUX]j YfgXUXY'Xcg'cf]U]gã cg'z'XYg]Wf]bXc'z'  
 XYg]Wj YbXc'Y]bh'f'dfYU]bXc'UXj YfgXUXYV]c'ÇE]WZVYa' Wa'c'XUg]bhYg'  
 XY'hc'XUg'Ygg]U]bZ'cfa U" Yg'Y'dfYggUYa' i a' g]ghYa UXYWgg]UW ~c'ei Y'  
 Y'dfYggUY'g'fYU" Yg'U'c]Yb]f]Wg'Ybh'YggY'g'cf]U]gã cg'v' i a UW]bW]UXY'  
 g]bhYg'Wa' Wz]h'Z'f]hã YbhYa' i h]X]g]M]b]uf  
 5gfY]fUçei YfY]Ya' U]d]W ~c'XY'bcã Yg'Y]bh]UWg'XY'd'U]bh]g'Yg'c'  
 X]g]c]g]U]g'bc'7ÇE]c'~bh'fbU]c'bU'XY'B'cã YbW]h'fU6çh]b]W

7C A C B ê G'7@5GG= =75A C G'CF; 5B =GA C G3

Bia UWgg]UW ~c'cg'cf]U]gã cg'g'c'U'fi dUX'g'dcf]h'fYa' U]c'Ya'  
 Wa'ia' YXYU'fXc'Wa' U]i a' W]h'f]c'"HcXUWgg]UW ~c'f'cf]U]b]nXU'  
 Ya' b]j Yg]z]YfUa' YbhXYU]fU]b]. bW]UWg]Wbh'6]c'c]M]ã YbhZU'ibXUXY'  
 U]g'XY'ia' UWgg]UW ~c'f'U9GDv'7-9"9g]M]g'g'c'XY]bYU]g'dcf'ia'  
 Wb]f]b]c'XYW]U]M]f]g]M]g'9gg]U]W]U]M]f]g]M]g'g'c'z'dcf]U]b]c'z]y]X' bW]g'  
 XY'g'U]XbhXUXY'G'c'g'V'Y'g]g]Y]X' bW]g]h]U'cb' a' M]çei YUC]ghã zh]W'  
 JY]YU'g'Y'Z' bX]ã Yb]U'9gg]U]fi d]ã Yb]c]g]j]g]ã' { g]ghYa U]h]U'~c'Xc'  
 Wb]W]ã Yb]c'YfYg' hã Ya' g]ghYa U]g'XYWgg]UW ~c'"



: ]]ifU' ì 9]Ya' d'c'XYW]cf]U]g]M]zfei M]g'

G=CH9A 5G'8 9`7@5GG=: =75uÈC

I a`gghYa UXYWgg]ÜWU ~c`dcXYgf`Wbdfi`fXc`Wa`XZfYbhg`cV!  
 Yhj`cg`7UXUi a`XYghfz`i a`df]bVd]c`Ücg`CEW`Ybcfa`Uj`c`Xg]brczY  
 ]fz`Ya`dfY]f`Xg]brcg`Wb]brcg`XYWfUMfYg`

7`Ugg]ÜWU ~czYa`6]c`c]JUHä`Uj`Yf`Wa`]Xbh]ÜWU ~czXyba`]bU`~c`  
 e agrupamento de organismos em um sistema estabelecido. As numerosas  
 formas de vida existentes precisam ser nomeadas e organizadas, de modo  
 ei`Ycg`V]Cfc]`cg`XY`hcXc`c`a`i`bXc`hb`lã`WfMfUXY`ei`Y`Wb`VWä`c`  
 cf]`U]ga`c`Y`Uc`ei`Y`fg`Y`c`V`Yhj`c`XY`Ygi`Xc`"5`XÜb],`~c`Xcg]`fi`dcg`XY`  
 cf]`U]ga`cg`Vg]Ug`Yb`Ug`Y,`~c`XY`Xf`fa`]b`U]g`WfUMf`g]Wg]a`dcf]Ubhg`z`  
 ei`Yg`Ylä`hf`U`cg`Wä`dUf]`Xcg`XY`a`cXc`ei`Ycg`ä`Yä`Vfcg`XY`WU]`fi`dc`  
 sejam semelhantes entre si, e diferentes dos de outros grupos.

C`g`a`frcXcg`Ui`Ug`XY`Wgg]ÜWU ~c`fY`bYa`Hä`Vfa`cg]`fi`dcg`Yä`  
 WU]cf]Ug`XY`a`cXc`ei`Yg`Ug`fY]Hä`cg`dfc`Wgg`gY`c`i`hj`cgei`YI`lg`Yä`  
 dcf]fzg`X]g`gä`Y`U]b,`Ug`Y`XZfYb,`Ug`Y`bhYcg`cf]`U]ga`cg`H]g`WU]`cf]Ug`  
 Zfa`lä`i`a`U`]Mf`ei`]U]b`Uei`U`cg`XZfYbhg`bj`Yg`fYdf`Yg`bHä`cg`XYZf!  
 Ybhg]`fU`g`XY`fYU`~c`Y`c`i`hj`U`

5`<`]Mf`ei`]Ug`Yg`hb`XZ`Yä`g`bhXc`Ug`Wb`XbhZ`Uduf]f`XY`a`]`"Yg`XY`  
 Ygd]VWg`WU]i`a`U`Wb`g]Hä`f`U`dcf`cf]`U]ga`cg`]bXj`]X`Ug`Yg`fY]Hä`YbhY`  
 fYU]cb`Ucg`Uj`fU]i`bg`dci`Wg`fY]bcg`WU]i`a`fY`b]bXc`i`a`[`fU]b`XY`b`a`Yfc`  
 XY`cf]`U]ga`cg`YbhY`cgei`Ug`ä`i`]H]g`Yng`g`EM`lg`Yi`a`UfYU`~c`X]g`ubH`

DUFU]`fU]bh`UdfYg`c`Xcg`a`frcXcg`XY`Wgg]ÜWU ~czcg`V]Cfc]`cg`ha`  
 Ygi`XUXc`YWä`dUFUXc`U]bUra`]U]U]g]c`c]`]U]U]`Yb`f]WZc`Wä`dcf]Hä`Ybrcz`  
 UYW`c]`]UYcg`Zcg`Yg`Xc`a`Ucf`b`a`Yfc`dcg]Y`XY`cf]`U]ga`cg`HcXcg`cg`  
 ramos da Biologia contribuem para esses estudos, mas as especialidades mais  
 X]fYHä`YbhY`fYU]cb`U]g`Wä`U`Wgg]ÜWU ~c`g`c`UH]`cbca`]UY`Ug`g`Yä`zh`W`

9a`VcfU]g`Xi`Ug`X]g`M]`]b`Ug`g`Y`g`dYf`dc`b`lã`z`UH]`cbca`]UY`g`z`a`Ug`  
 Wb`fU]b`U]bca`Yb`W]i`fU]fY`bca`]bU`~c`LY`bcg`Yg`UW`YWä`Yb`hc`Xcg`g`g`M`  
 a`Ug`]Mf`ei`]n`UXc`g`z`Ug`ghä`zh`W`Ygi`XU]g`fYU`"Yg`Y`c`i`hj`Ug`U]b`XU]b`~c`  
 estabelecidas.

B =J 9=G&lt; =9F äFEI =7CG

C`g`V]Cfc]`cg`Wgg]ÜWä`cg`cf]`U]ga`cg`]bXj`]X`Ug`bc`bj`Y`Vzg`W`XY`  
 Ygd]VW`I`a`UYgd]VW`f`Zfa`UX`d`cf`cf]`U]ga`cgei`YWä`dUf]`lã`ä`i`]H]g`  
 WfUMf`g]Wg]a`dcf]Ubhg`"5`fä`X]g`z`bcg`cf]`U]ga`cg`Wä`fYdfc`X,`~c`  
 gM`i`UXU]g`Ygd]VW`g`c`Zfa`UX`g`d`cf`d`cdi`U`"Ygei`Yb`~c`dc`Xä`hf`X!  
 g`Wb`Xbhg`Zf]H]g`Wä`ä`Yä`Vfcg`XY`b`Yb`i`a`Uci`hf`UYgd]VW`

5`g`Ygd]VW`gei`Yg`h`c`Wf`lä`YbhY`fYU]cb`U]g`d`cf`Wä`dUf]`lã`f`WfUW`  
 hf]g]Wg]a`dcf]Ubhg`g`c`U`fi`d`UX`g`Yä`i`a`[`.bYfc`Y`WU]i`a`f`WVY`Xc]g`  
 nomes (nomenclatura binominal). A primeira palavra corresponde ao nome  
 Xc`[`.bYfc`Y`Ug]i`b`XU]fi`a`UX`Yhj`cz]YfUä`YbhY`X]g`M]h]c`ci`[`Yc]fz`ÜWz`

ci žUbxLžfYUĥj c Ů bca YXYi a UdYggU'9ggUzfa UXYXbca ]bU -c žc] estabelecida pelo naturalista sueco Lineu, fundador da taxonomia moderna. 9'Yi ĥ]nci 'bca Yg'Ya 'Uĥa 'dcfei YfUbyggU' ]b]i Uei YfYi X]ĥcg'Xc'gM' ĥĥa dc'g'YWa i b]WU'La " @]bY' Uf]M]i Ůcgg'fYg'i a Ůbcgc [. bYfc < ca c' flca Ya LYU'Yg]fM'Y'i a ŮUXY' c' bca YXY< ca c'gd]Ybg]flca Ya 'gzV]cL'

DfUWbgfi ]f' UWggU'W -c' \]fzfei ]WĕU fi dĥa !gY' i a 'ci 'a Ug [. bYfcg'Ya žĥa ]]Ug'Zĥa ]]Ug'Ya 'cfXybg'Ug'cfXybg'Ya WggYg'Ug'WggYg' Ya 'Ůcg'Ycg'Ůcg'Ya 'fY]bcg'5h Ua YbhžXybf'c'XUXj ]g-c' df]b]WU'Xcg' gYfYg' ]j cgg'c' fYWb\YXcg'WbW'fY]bcg' Cg [ fi dcg'XYcf] Ů]g]a cg' ]b! W'Xcg'Ygg'U'W] cf]Ug'Ya 'ei Uei Yf'bj Y'X' \]fUfei ]UfYWW'Ya c' bca Y XY'zl cbžYWWU'zl cb'fYWW'Yi a UX'Ůb], -c'ei YUfU] YUg'WfU'W]f]Wg' mais importantes compartilhada por todos os seus membros.

DfUdyfa ]ĥf' i a Ug' VXj ]g-c' a ŮcfzdcXĥa !gYU'W'g'Wb]f'cg'dfU' cg' sub- e super- a qualquer categoria.

9a 'ei Uei Yf'bj Yž' a ĥzl cb]bXW'i a ŮUg'Y' c' i ĥj ŮW'a i a žci 'gYUž todos os seus membros se desenvolveram a partir de um ancestral comum.

### SISTEMA DOS CINCO REINOS

5' df]a YfU] fŮXYWggU'W -c' Xc' gYfYg' ]j cgg'fYWb\YXcg'lg'fY]bcg' f]Y] YfU'Y5b]a ŮždYc' a Ybcg'XYg'X'ei Y5f]g'c'f'Yg'Yg'U'Y'W' Ůdf]a YfU ĥU' cbca ]Ůbc' g'fW'c' =] U'7"5gd' Ůbh]g'Wa 'fŮnYg'g'c' ĥc' X]ZfYbhg'Ya ' sua forma de vida e em sua linha evolutiva dos animais, que se movimentam e ingerem alimentos, que o conceito de dois reinos permaneceu em vigor durante muito tempo.

: c]bc' g'fW'c' L-Lžei ŮXc' ž' Yg'U' Ua Ug'Xc' ei YfY' ]Xbh'ei Ycgc'f! [ Ů]g]a cg'i b]W'i 'fYg'b-c' gY'bei ŮfU' ]a 'Ya bYb'i a ŮX]g'X' Ůg'W] cf]Ug' žei Yg'dfcd' g'U'Wb]W]h' U -c' XYi a ĥfW]fc' fY]bc' d]fU'U'f] ]z] cgg'c' fY]bc' Dfĥg'U' A i ]ĥc' ĥĥa dc' X]dc]g'Xy'gY'Xy'W]f'ei YUžc'cg'bhg'Y' fUž'fa U Vz'g'WXYbi ĥ], -c' X]gd' Ůbh]g'cg'Z' b] cgg'ei Yg'Y'U]a Ybhĥa 'dcf' Ůg'cf, -cž ŮbXU'fĥa 'Wgg'U'W'cg'bc' fY]bc' j Y] YfU' dcf' W' gUXY'g'Y' ŮdU'Ybh'Ya c'Xc' XY'W'g'Ya Yb]c' a YX]bh'U'g'fŮnYg'

5h Ua YbhžXY' ]Xc' Ůc' [ fŮXY'Xy'g'j c'j ]a Yb]c' X]g'ĥ]W]W'g'XY'g'i Xc' XU'Y'i Ůžg'z'W'fc'ei YUXj ]g-c' df]b]WU'Xcg'fYg' ]j cgg'c' f'Yb]f'Y' ]Y' YfU'g' YŮb]a Ug'za Ug'Ybh'Ycf] Ů]g]a cg'W'Ug'W'i 'Ug'W'fW'a X'Ya Ya VŮbUbi W'fU' Ycf] Ů]g]a cg'W'Ug'W'i Ugha 'Yg'Ua Ya VŮbU' C'gd]a Yf'cg'g'c' Wĥa ŮXc'g' de procariotos e os segundos, eucariotos.

5g'W'i 'Ug'dfc'W]c'fW]g'ĥa Vfa 'W'fW'a X'Ycf] ŮbYUg'za ]ĥc'WbX]Ug'z' W'fcd'U'g'g'U' Ycg'Yg'W]U'Xcg'Yci ĥUg'Yg'fi ĥ' fUg'Yg'd]W]U'g'ei YŮdU' fY'Wa 'Ya 'W'i U'g'Y' W]c'fW]g'5g'VU'W]f]Ug'YUg'U' U'g'j YfX]U'ĥi 'ŮX]g'g'c' W'i 'Ug'dfc'W]c'fW]g'YU'ĥi cbca ]Ůa c'XYbU'Ug'U' fi dci 'bi a 'ei Ůĥc' fY]bcž c' A cbYfU'ĥa Vfa 'Wb\YXc' W'a c'fY]bc' Dfc'W]c'ĥU'

5g'W'i U'g'Y' W]c'fW]g' dfcj U'Ya Ybh'Xf]j Ůĥa 'XYU'g'WU' " Yg'gla !

V]CEWg'XYW'i Ug'dfcWf]CEWg' C' fY]bc Dfch]gUf'Zcfa Uxc'dcf'Xj Yfg'g' Yf Wf]c]c'g'i b]W'i 'fYgei Yj j Ya 'lg' Uxc'g'ci 'Zcfa Ua 'W' b]Ug'WfUMf! g]H]Wg'5WYX]H]Ug'Yei YW]U'i a 'Xcg'fY]bcg'a i 'h]W'i 'fYgei'Y'X'g'bj'c'j'Y' a partir de ancestrais protistas.

C' fY]bc 5b]a U'W'a d'fYb'X'Y'cg'cf] U]l]g'a c'g'a i 'h]W'i 'fYgei'Y'ha 'g' U'g' W'i 'U'g'cf] U]b]n]U]g'Ya 'X]Z]fYb]h]g'h]W]X'c'g'g'c'a C'f]Y]g'ci 'ha 'a'c]V]X]U'Y' d'U'W]U' [f]U]g'U]H]M]X'c'g'W]b]f]z]h]g'Y]X] [Y]f]a U]a Y]b]c]g'Ya 'g'Y' ]b]h]f]c]f' C' f]Y]bc J]Y] Y]U'ci X]L]g]D]U]b]H]g'f'Zcfa Uxc'dcf'cf] U]l]g'a c'g'a i 'h]W'i 'fYgei'Y'Z' Ya [Y]U]z]h'a d'U'f]Y]X]g'W'i 'fYgei'Y]W]b]h'a 'W'fcd'U]g'c]z]bcgei U'g'dfc'X'i n]Y'a 'g'Y' 'd'f]C]f]c' U]a Y]b]c' a 'X]U]b]H]U]Z]c]h]g]b]h]g'Y'

O reino dos Fungos, o quinto reino, inclui os organismos multicelulares ci 'a i 'h]bi W]U]X'c'g'f]g'c' f]z]W'a 'a U'g'X'Y'i a 'b'•W]c'•W'i 'U]f]z]ei Y]X] [Y]f]a 'cg' U]a Y]b]c]g'Y' h]f]b]L]a Y]b]H]Y'cg'U]g'c]f] Ya 'U]f]U] f]g'X'Y'g' d'Y]Z]M]g'df]c]h'! d'U]g'a z]h]W]g'h]i Vi 'fYgei'X]b]c]a ]b]U]X]g' \ ]Z]g'f]U]gei U'g'Zcfa Ua 'g'Y' g'W'f]d]c]g'f'

5 W]g]g]ÜW'~c X'c'g'g'f]Y'g'j j'c'g'Ya 'W]b]W'f]Y]bc]g'V]U]g]Y]U]g'Ya 'f'f' g]b]j] Y]g' X]Y'cf] U]b]n]U'~c. 'c' d'f]a ]h]j'c' b]j] Y' d'f]c]W]f]c]h]U'c' Y' W]f]c]h]U'i b]W'i 'U'f'Y'c' Y' W]f]c]h]U'a i 'h]W'i 'U'f' B]Y'g]g'Y'•'H]a'c' b]j] Y]z]U]g]f]f'g' ]b]U]g'Y]c'i h]j] U]g'df]b]W] d'U]g'g'Y]U]g]Y]L]a 'bc' h]dc' X]Y]bi h]f]f'~c' Y'g'Y' d'f]Y'g]L]a 'bc]g'X]Z]f]Y]b]h]g]h]dc]g'X]Y' cf] U]b]n]U'~c' h]g]g' 'U'f' W]f]U]M]f]g]h]W]g'X]Y]U]b]a U]g]g] Y] Y]U]g'Y]Z] b]c]g'

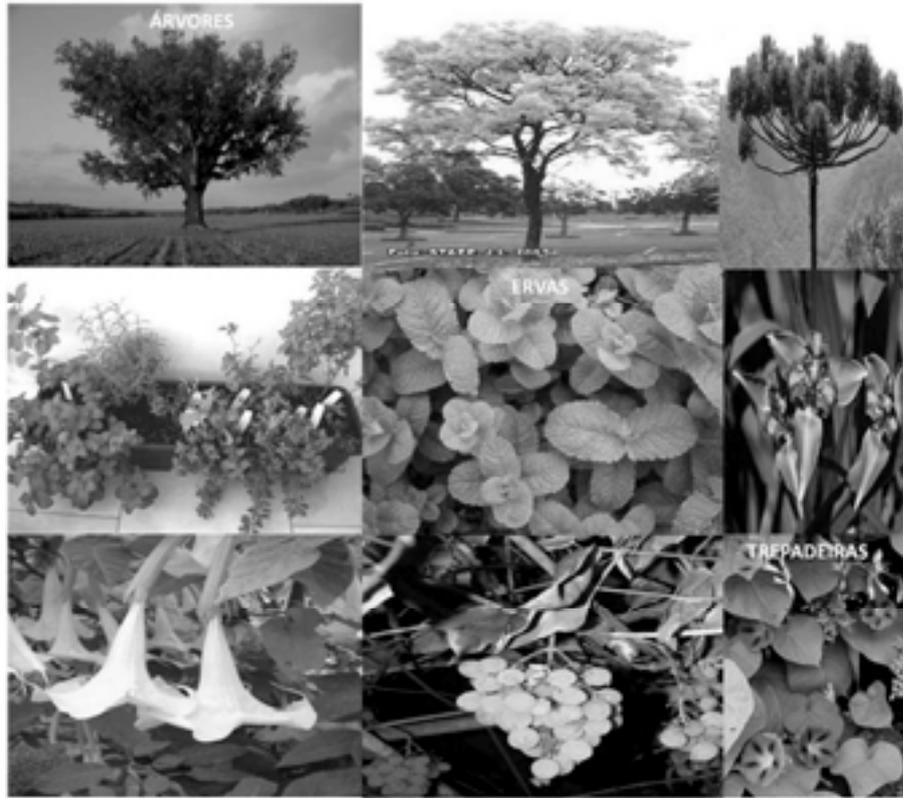
9a f]Y]U'~c 'U'c' f]Y]bc J]Y] Y]U]j' Y]f]a c'gei Y]bc W]f]g' X]U'< ]g]C]E]U]nci j'Y' j'z]f]c]g]g]h]a U'g'X]Y]W]g]g]ÜW'~c Yei Y'c]g'd]f]a Y]f]c]g'Z'c]f]L]a 'Y' ]X]Y]b]h]a Y]b]H]c]g' a Y]bc]g'Y]U]c]f]U]X'c'g' B]Y]g'Y]W]d]h]i 'c' ]f]Y]a c]g'Z]h]f]i a U]j] ]U]Y]a 'I' bc' H]a' dc' Y' U]d]f]Y]b]X]f]i a 'd]ci W]g'c' V]f]Y]U] ]g]C]E]U]X]U]V]c]h]b]W]Y]X'c'g'X]Z]f]Y]b]h]g]g]h]a U'g'X]Y] W]g]g]ÜW'~c W]U]X'c'g'Y]U]X'c]h]U]X'c'g'U]b]h]f]c]f]a Y]b]H]U]f]a X'c'gei Y]g'c'Y]a j] ]b] W]U]h]i U]a Y]b]H]d'U]f]U]W]g]g]ÜW'f' U'g'd'U]b]H]g'G'c' U]c]f]X]U] Y]b]g'a i ]h]c' X]g]h]b]h]g' ei Y]j] U]f]L]a 'X]U]a c]f]Z'c' ]J]U]h]f'W]Y]U]f]b]l]ei Y]Y'gei Y]i h]j]n]L]a 'a'c' f]W]U]g'f'f'

# Escolas de classificação

8 Y'g'X'Y'c'g'd]f]a C]E]X]c]g'X]U]W]b]W]U]c' \ca Ya 'U]d]f]Y]b]X]i' U]W]g]g]ÜW'f' W'a 'o intuito de compreender o mundo que nos cerca. Isto tem uma utilidade d'f]z]h]W' d'f]Y]W]g]L]a c]g'X]Y]g'W]f]f'ei U'g'd'U]b]H]g'Y]f]L]a 'W'a Y]g]h] Y]g]z] Y]b]Y]bc]g'U]g'z' forrageiras etc.

7 U]g]g]ÜW'f' i a U]U'~c' ]b]Y]f]Y]b]H]U'c' W'a d'c]f]L]a Y]b]c' \i a U]b]c' Y]H]a' 'g]y]b]X'c' V]z]g]W'X]Y'cf] U]b]n]U'f'

5c' 'cb]c' X]U' \ ]g]C]E]U]z]g' f] ]f]L]a 'bi a Y]f]c]g'g'g]g]h]a U'g'X]Y]W]g]g]ÜW'~c]z' c'gei U'g'W]g]h]i a U]a 'g'f' U]f]i d'U]X'c'g'Ya 'ei U]f]c' W]M]c]f]U]g' \z]V]h]c]z]U]h]U]M]U]g'z' b]U]h]f]U]g'Y]U]c' ]Y]b]H]W]g'



: ]]i fU( Ĩ '9l Ya d'c Xyd'Uhg'U'VEUg' \Yfz'WUg'Yhf'dUX]fUg'



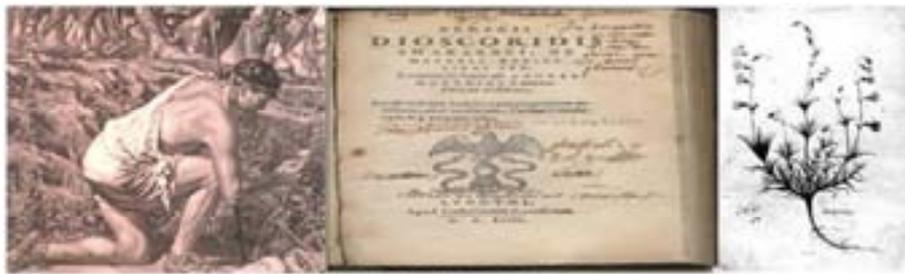
Teophrastus (370-285 a.C.).

6Ug'XUg' bc `zV]hc' fzfj cfYgž Yfj Ugž trepadeiras). Os primeiros foram, evidentemente, os menos elaborados, embora seus autores acreditassem que eles refletiam Uó]XUg'bU' fUg'B Yg'gggh'Ya Ugžfj cfYgž ervas, trepadeiras, etc., consistiam os grupos principais de plantas. Teophrastus (370-285 U7'L'fc' bca Ya Ug'VY'WfY'Xg'Y'df'c'Xcž g'bx'c' Wbg'Xf'U'c' c' DU'XU6ch]b]W

: ]]i fU) Ĩ H'Ycd'fUg'i gžc' DU'XU6ch]b]W

8 Ug &&+`cVUg`ei YWY[ fLá `Ucg`bcgg`g`X]Ug`X] Ug`XYUg`g`c`g`VY`  
 6ch|b|W`!`5`<`|g`U`B`U`h`f`U`X`L`g`D`U`h`g`f`B`Y`<`|g`c`f`|U`D`U`h`f`i`a`L`z`W`a`!  
 dcg`U`dc`f`-`"j`f`c`g`/`G`c`V`Y`U`g`F`U`h`"Y`g`X`c`7`f`y`g`M`a`Y`b`c`X`L`g`D`U`h`g`f`B`Y`M`g`g`  
 d`U`h`f`i`a`L`W`a`dcg`U`dc`f`\*`"j`f`c`g`C`g`"j`f`c`g`Y`f`L`a`"a`i`|l`c`"|Y`f`U`g`z`U`g`Y`g`d`f`!  
 cies eram referidas apenas ocasionalmente e em alguns dos casos nem se  
 d`Y`f`W`|U`X`Y`e`i`Y`Y`g`d`|M`Y`g`Y`f`U`h`U`":`c`f`L`a`"X`Y`g`M`|U`g`Y`b`h`Y`)"`S`S`!`)"`S`Y`g`d`|M`Y`g`  
 :`c`|`X`j`i`|`U`X`c`"W`b`W`|l`c`X`Y`a`c`f`z`c`|`|L`z`W`g`g`U`M`~c`Y`|`g`U`E`|U`5`j`U`b`U`X`c`  
 d`U`f`U`c`g`Y`i`"h`a`d`c`z`H`Y`c`d`f`U`g`i`g`|b`h`c`X`i`n`j`i`"U`d`f`z`h`|W`X`U`U`W`a`U`h`U`~c`X`Y`  
 d`U`h`g`z`|b`h`c`X`i`n`j`i`"b`c`j`c`g`h`f`a`c`g`h`|W`|W`g`z`X`j`|b`|i`j`i`"X`Z`f`Y`b`h`g`z`f`a`U`g`X`Y`  
 f`Y`d`f`c`X`i`,"~c`Y`X`Y`|b`U`c`f`Y`g`M`b`W`|U`g`Y`Y`g`i`X`c`i`"U`|`Y`f`a`|b`U`~c`X`Y`g`Y`a`Y`b`h`g`X`Y`  
 j`z`f`|U`g`Y`g`d`|M`Y`g`"

**DEPOIS VIERAM OS ROMANOS....**



DIOSCORIDES (40-90 D.C.)

: ||i fU\* 1 8 |cg`M`E`X`g`Y`U`|i`a`U`g`X`Y`g`U`g`c`V`U`g`

8 |cg`M`E`X`g`Z`|i`a`"Z`g`W`|f`Y`|c`z`e`i`Y`g`Y`h`c`f`b`c`i`"W`i`f`|`-`c`"a`|`|H`f`"X`Y`  
 Nero, o Imperador Romano. O seu cargo militar permitiu-lhe fazer grandes  
 viagens e assim estudar uma grande variedade de plantas.

B`U`c`V`f`U`8`Y`A`U`h`f`|U`A`Y`X`|W`g`-`c`f`Y`Z`f`|X`L`g`U`g`d`f`c`d`f`|X`U`Y`g`a`Y`X`|W`U`g`  
 X`Y`a`U`g`X`Y`\*`S`S`d`U`h`g`W`a`U`|i`a`U`g`X`Y`M`,"Y`g`V`c`h`b`|W`g`z`a`U`g`g`Y`a`"c`W`f`z`h`f`  
 V`W`b`h`U`W`X`L`g`c`V`U`g`X`Y`H`Y`c`d`f`U`g`i`g`8`Y`g`M`Y`Y`f`U`h`Y`g`Z`M`"Y`g`z`"U`g`Y`d`c`f`  
 j`Y`n`g`U`c`f`Y`g`"

5`d`G`c`"h`f`U`U`c`"X`Y`8`|G`W`f`|X`Y`z`W`a`"d`U`h`g`X`Y`i`g`c`a`Y`X`|W`U`"e`i`Y`  
 j`|`|`c`f`c`i`"U`h`f`c`g`W`L`J`"z`U`V`c`h`b`|W`Y`U`a`Y`X`|W`U`h`c`f`b`f`L`a`!`g`Y`|b`X`|g`c`V`z`j`Y`g`"

C`g`|f`Y`|c`g`z`c`f`L`a`"a`U`g`h`f`X`Y`g`W`X`c`g`d`c`f`"Y`f`U`|g`U`g`Y`V`c`h`b`|W`g`  
 e`i`Y`a`U`b`h`j`Y`f`L`a`"Y`g`h`d`Y`f`c`X`c`X`U`|`g`U`E`|U`X`U`W`g`g`U`M`~c`U`h`f`U`a`Y`L`X`Y`X`c`  
 g`f`W`c`L`J`=""

**OS HERBALISTAS**

9`f`L`a`"a`f`X`|W`g`e`i`Y`X`Y`f`L`a`"f`U`b`X`Y`W`b`h`f`|M`|,"~c`U`c`"Y`g`i`X`c`X`L`g`d`U`h`g`  
 5`b`X`Y`U`7`Y`g`U`d`|b`c`f`%`!`%`\$`L`M`U`i`a`"a`f`X`|W`|H`U`|b`c`"v`i`a`"Y`|`Y`a`d`c`X`i`a`"

importante herbalista que possui alguns nomes de plantas em sua homena-  
 [ Ya ždcf'Y Ya d'c. 7UgJd]b]UW]bUWfU !VUg'E" B YgUfcdWg f] ]fUa  
 cgdf]a CE]cgXUZfa UW]bcgUYUgdf]a YfUgWbf]M ], " Yg]i gHUXg



: ]i fU+ĭ 9l Ya d'cgXYU[i bg\YfU]ghg'



: ]i fU, ĩ 5bXYU7UgJd]bc"7UgJd]b]UW]bUWfU !VUg'E

5fhUM]gfg]WLJ =L YggYbWUa Ybh'dfz]WgZwa 'dci WgWUMMYg'  
 B~c`Y] lã Ya WbhUÚb]XKygYbhYcgcf[Ub]gã cg'9l": gghYa UgY i UXY  
 Lineu (1707-1778). Classe 21: Monoecia: Typha (taboa-monocot.), Quercus  
 (carvalhos, eudicot.) e Thuja (tuaia- gimnosperma)

B U] fUgfg]WLJ =YL=L Vi gW] lã Úb]XKygĭ bU] fUgĭ YbhYcg'  
 [fi dcggy]i bXc i a d'Ubc X] ]bc"i h]nã i a b•a Yfc'a Ucf XYWUMMYg'  
 @lã UfWž6Ybhã / < cc\_Yž8 Y7UbXc`Yž:i ggY "8 i fUUh'c Ux] Ybrc'  
 Xc ĩ8 Ufk ]b]gã cĭ

: ]c] Yb]h]Wgfg]WL=L Uh'\c'Y. VgYXcgbU: =@C; 9B=5 Xcg[fi!  
 dcg\]g]CEWXYfYU" YgXYzl cbgflã ]Ug]. bYfcgYgd]Wgžcdci U" Ygž  
 YWUUh] jgXYUbWg]fU]XKYYXgWbX bWUf]Y i ]bXc'8 Ufk ]bE

5gg]a Wa c Uei YgUbh]cgg]gYa Užcgg]gYa UgUfhUM]ggb-c YbWb!  
 hUã \c'Yei Uei YfUd]W~c"i a g]gYa UfhUM]hã Wa c•b]WcVYh]c'

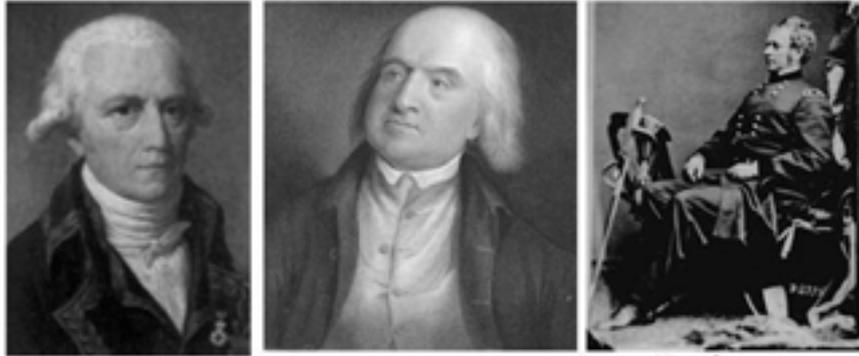
# 5

gfi a 'a Ylc Wbj Yb|YbhXYg|h Ufi a Ud'UblUXb|fc XYi a UWggjÜW ~c  
 YWb|f|V|f' dUfU Ug U|X|Yb|ÜW ~c" B ~c h'a 'ei Uei Yf' dfYcWdU ~c XY  
 a cglf' fYU" Yg XYÜb|X|Xg' C 'a Ug Wb\W|Xc' f'c XY @|bb|fz'f'Uf' :"  
 j cb @|bb|fz' %\$+!%+, İz di V|W|Xc' bUcVfUİ GdY|Yg' D'Ublfi a İ' f|%) ' İz  
 ei YÜW| Wb\W|Xc' Wa c İ gjghYa Ug| i Üİ zdcf' h'f' g|Xc' c' df|a Yfc' U|Xf'  
 [ fUXY . bZ|Y Ucg' W|U|W|Yg' ÜcfUg' 9a' g|ı' gjghYa U|@|b|Y' fYWb\W|Xc' &  
 W|Yg'Z'U' h'a UXYUg'Z'fa U|Udcf' d'UblUg'gYa' ÜcfYg'f'f'ndlc[ Ua |U|' DUFU  
 U|W|Yg'g'Wa' ÜcfYg'cg'W|h'f|c|g| h' |n|Xc'g'Z'f|a' df|b|V|Ua' Yb|Yc' b'a Yfc'  
 XY Yg| Ua' Yg'g' X|X| fUYWa' df|a' Yb|c' Xcg'Ü' Y|Yg'Z'Yc' g|ı' c' X|Ug' d'UblUg'g|  
 [ i b|Xc' c' h|dc' XY ÜcfYg'ei Y|YU|dfYg'Yb|U|f|a' cbc W|Z'8 |c W|Z' Dc' n| Ua' |U|'  
 7ca c' g|ı' d'Y|W|Yz'ı a' gjghYa U|f|U|W|U' i h' |n|Ug'Y|Ydci W|g'W|U|W|Yg' d'UfU  
 Wb|g|f| f'cg' [ fi d'cg' C' f'Yg' h|Xc' f'ei Yb|Yg'Yg'f'c' Ü' i f'U' d'UblUg'gYa' i a'  
 fYU' fYU|W|b|Ua' Yb|c' XY Üb|X|Xg' Dcf' Y| Ya' d'cz' bU' 7' Ugg'Y' &% XY @|bb|f'  
 f|a' cbc W|Z'Yb|Wb|f|Ua' !g|YH|nd|U|f| a' UA' cbc W|h' YX' b|U|Z'E' i YfW|g|f| a' U  
 X|W|h' YX' b|Y|Y|H|ni' U|f| a' U; |a' bcg|Yfa' U|'



: |i fU- İ' @|b|Y' .g UcfUY|Y| Ya d'cgXYg|ı' gjghYa U

NATURAIS



Jean-Baptiste Lamarck      Bentham      Hooker

: ]]i fU%Šİ 9l Ya d'cgXYbUi fU]gUg'

C gggghYa Ug'Uc[ Ybf]Wg'dfcWfUa i gdfhcXUU]bZcfa U~c X]gcbj] Y' bc'a ca Ybhc UfYgdY]hc Xcghzl ca Ug'Ybj c] ]Xcg'zdfcWfUbx'c fYUW'cbz!`cg gY[i bXc i a UU]b]X]XYVgYUUYa 'UbWg]fU]X]XY'XgYbX bWU

G=GH9A 5G'8 9 `7@5GG=: =75uÉ 9GDF ãH=7C G'

5g' df]a YfUg' Wgg]UW" Yg'Z]H]g' dYc`ca Ya 'h]b\Ua 'i a 'Wfzhf' dfzh]Wzei Yg'YU' gh] Ua {g'byWgg]X]Xg'YgdWfUWg'XYei Ya 'Ugi h]n]U' 5]bXU'c'Y'Ya 'X]U]X]g]b]i]a cg'cg]U]a Ug'Xca f]g]Wg'Xcg]U]a Ug'gY] U [Yb'g'zdf'Y' Ya d'c"9g'YggghYa Ug'c X]g] bU'Xcg'XYgghYa Ug'XYWgg]UW~c' dfzh]Wg'Yzdfj Yn]g'WfYwa XYVg'Y'Wbh]UW'g'YbXc'a Yfcg]b]gfi a Ybhcg XYgghYa U]n]U~c i h]h]z]U

5 gghYa zH]Wg'ZY i a U]i ]bU]bUg' ha Ug'X]W]Ug'Ygha i 'UbXc i a U gff]YXYbcj ]X]X]g'a YrcXc Q]Wg'fYU]h]X]g'Ya 'a i X]b, Ug'g Vg]U]b]U]g]bU H]cbca ]U'Xcg'g'Yg'j ]cg'5 Wgg]UW~c X]gd'Ub]U]g' Ya 'g'Ya cX]U]bXc' fU]X]La Ybh'ZYgdci Wg'fYZf. b]W]g]bU]c]b]U]g'Yg'c Vg]U]b]h]X]g'h U]n]X]g' 5ei ]z'f]U]f]Yg]b]U]Li a U]W]U]M]f]n]U~c X]U]X]j Yf]g]X]X]Y]X]d'Ub]h]g'hff]Yg'f]Yg' fti 'Ya V]Q]E]U]g'Z]Wa : bZ]g]Ybcg]fi d]cga Ug'fYdf]Yg]b]U]j cgd]U]Uc'6f]U]g'z dfcWfUbx'c ]bWf]d]c]f]c]g'f]Yg' h]Xc'g'U'c[ Ybf]Wg'a Ug]b]U' Ybh]g]b]U]W]g' g]UW~c j Y]YU"

B 5HI F9N5 `85G'7@5GG=: =75uÉ 9G'

C g'cf[ U]g]a cg'Yg'c'cf[ U]n]Xc'g'Ya 'i a 'gghYa U\]Yfzfei ]W' XY hzl cbg'7UX]h]z] cb'Yei ]j UYU' i a U]W]M]cf]U]H]cb' a ]W]f]g]d]W]Z]. bYfcZ Z]a f]U'Y]W]Yf]Y]W]Y]i a 'bca YV]W]b]U]W'"C' bca YXY' i a 'h]z]cb'X]Y' Yg'f' Wfcz'•b]W'Y'i b]j Yf]g]Z]XYU]W]f]Xc' W'a 'cg'df]b]W]d]cg'XY'bca YbW]h] fU'5'

## 5

Wa V]bU~c XYi a 'gghYa U\]fzfei ]W`XY]zl cbgžUWgg]UW~cžWa 'c' gghYa UXYbca YbW]h fUfW]a UKUXY]J cbca ]U'I a '[fi dcžYb]fYU]b]cž dcXY'g]f'cf[ ]U]h]Xc`XY X]j Yfg]g`a U]Y]fUž`XY`UWfXc`Wa`cgdf]bW]c]g' U'cg]UWgž`Ua YcXc`c[ ]Uci`cg`cVY]h]cgXc`U`hcf"5`gghYa zh]W]fYg`hž Yb]cžXU]i b]-c Yb]fYU]H] cbca ]UYUgdfYa ]gg]gei Y]g]c`dcf`h]h]XYi a U XY]fa ]bUXUWgg]UW~c"

I a UWgg]UW~c ]fh]UW`f]ei YUM]gYU]Ya i a UWMUM]g]WgY] cionada arbitrariamente. Em 1735, por exemplo, Lineu baseava boa parte de g UWgg]UW~c`bc`b•a Yfc`XY]g]La Ygdcf`UcfžYg]UWY]W]bXc`&`W]b]g]ž b]ei YYei YU]Wi`Wb\]Y]Xc`Wa`c`G]ghYa UGM i U`XY`7`Ugg]UW~c"9a`Wb]h]fU]dc]g,~cžUWgg]UW~c`b]h]fU]ž]bU ]i fUXU]bU]Vch]b]W]dcf`i`gg]Y`f]G]Y`Ybg`%`+hžU]fi dUcgcf[ ]U]g]a cgXYUWfXc`Wa`Ug]Ya`Y\]U, U]Y]U" I a`UffU]b]c`f]h]b]c`a`Ug]b]h]fU]ei`U]b]c`a`Ucf`c`b•a`Yfc`XYU]f]M]hcgW]f! fYU]c]bUXcgY]Y]bW] ]fi ]i`a`ci`f`%`+LYždcf]h]b]c]ža`Ucf`f`c`g]Y`dcX]f`XY`dfY]X,~c"8`]b]h]XYi`a`a`cg]U]W`XY]WUM]g]W]g]a`UWgg]UW~c`b]h]fU`UWU]Y]g]fi`h`fUX]Ya`U]b]XUX]g]WbW]W]X]g]Ya`d]f]W]a`Yb]h]Y]g`g]h]h]XU]dcf`i`a`Wb]1`b]c`XY]WUM]Y]g]Y]M]c]bUXcg`Wb]Z]fa`YUY]d]Y], b]W]UXc`U`hcf`5]h]UX]W]X]U]XY`%, SžU6ch]b]W]Z]Xca ]bUXU]dcf`i`a`gghYa`U]Y]c!`i`W]c]b]g]dUX]Y]Wgg]UW~cž`M]g]UXc`bc`[fU`XY]g]a`]U]f]XUX]g`B`Ya`a`Y]g]a`c`UX]Z`g`c`XY]h]cf[ ]U]g]Y]c`i`h]j`U]g]bc`U]bU`Xc`g]W]c`L`L`Y]ci`Ua`i`X]b, U]g]g] ]b]U]M]h]j`U]g]bUWgg]UW~c`Xcgg]Y]g] ]j`cg`5`Y]c`i,~c`Z] ]b]W]f]dcf]UXU]bU`gghYa`zh]W]W]a`c`Y]d`]W]~c`d]f]UWgg]UW" Y]g]b]h]fU]g]df]f]Y] ]g]h]b]h]g`5`g`Wgg]UW" Y]g]b]h]fU]g`Y] ]j`U]a`Ya`W]bg]X]f]U~c`U]U]c[ ]Y] ]UY]U]b]U]. b]Y]g]ž`U]M]h]j`U]a`[fi`dc]g]d]f]U]f]h]W]g]Y] ]b]W] ]a`[fi`dc`XY]U]b]Xc]g]U]d]Y]b]U]g]dcf`U`!`h]d]ca`cf]U]g`c[ ]U]d]Y]b]U]g]U]d]U]g]c`Y]g]U]W]Y]W]a`Y]b]c`XU]g]ghYa`zh]W]U]c[ ]Y]f]h]W]f]k`Y]b] ]%`\*)`h]žei`Yc]g]h]l`cbg]d]U]g]f]U]a`U]g]f`XY]U]b]Xc]g]dcf`Wa`d]U]f]h]U]f]Ya`WUM]g]h]W]g]X]f]j`U]X]g`Y]X]X]g]X]Yi`a`U]b]W]g]f]U]W]a`i`a`ž]g]g]b]U]d]ca`cf]U]g`C`d]f]b]W] ]c`d]f]a`cf]X]U`XU]g]ghYa`zh]W]d]U]g]ci`U]g]f`U]b]W]g]f]U]X]X]Z]Y]U]g]W]g]g]U]W" Y]g]d]U]g]f]U]a`U]M]g]M]c`f]Y]W]b\]Y]a`Y]b]c`Y] ]W]g]j`c`XY[ ]fi`dc]g]a`c]bc!`U]f]h]W]g]f]ti`W]Xc]g]X]U]c`bca`Y]W]X]g] ]W]d]f]U]Y]g]g]Y]g]W`UXU]g]ghYa`zh]W]"

G]ghYa`U]g]XY]Wgg]UW~c`U]c[ ]Y]f]h]W]g]ci`W]X]g] ]W]i`B`Y]g]Y]g]ghYa`Uc`U]fi`d]U]a`Y]b]c`Xc]g]cf[ ]U] ]g]a`cg]f]XYUWfXc`Wa`c`[fU`XY]d]f]Y]b]h]g]W`Y]b]h]Y`Y]Y]g`C`g`W]Xc[ ]f]U]a`U]g]f]ti`z]f]cf]Y]g]U]c[ ]Y]f]h]W]g]X]Y]a`cb]g]f]U]a`U]g]f]Y]U" Y]g`\]d]ch]h]W]g]Y]b]h]Y`cg]cf[ ]U] ]g]a`cg]ž`Y] ]U]Xc`Ya`W]bg]X]f]U~c`U]g]U` ]g]U]U]evolutiva dos seres.

5gg]Ya`Y\]U, U]g]Y]b]h]Y`cg]cf[ ]U] ]g]a`cg]g`c`W]bg]Y]ei`. b]W]U]g]X]U]Y] ]g]h]b]W]U`de um ancestral comum, a partir do qual os grupos divergiram ao longo`Xc`h]a`dc"C`[fU`XY]g]a`Y\]U, U]Y]b]h]Y]Y]g]Y]g]z`f]Y]U]c]b]UXc`Wa`c`h]a`dc`Ya`ei`Yc`W]ff]Y]`UX]j`Y]f[. b]W]U]"

C`g]f]Y]g`h]Xc]g]XYi`a`U]U]bz` ]g]Y]W]X]g] ]W]g]c`[ ]Y]U]a`Y]b]h]Y] ]d]f]Y]g]g]b]U`Z]c]fa`UX]Y`W]UXc[ ]f]U]a`U]g]ž`ci`g]Y]ž`X]U] ]f]U]a`U]g] ]f]U]a` ]U]W]Xc]g]ei`Y]Y] ]d]f]Y]g]l]a`f]Y]U" Y]g]XY]d]f]Y]b]h]g]W`Y]b]h]Y`cg]h]l`cbg] ]b]W] ]Xc]g]b]U]U]bz` ]g]Y]f]W]U]a`UXc]g]XY`h]fa` ]b]U]g]ci`h]l`cbg]h]fa` ]b]U]g]"7`cb]g]g]h]ž`[f]U]W]a`Y]b]h]ž`XYi`a`U]g]ff] ]Y]XY]"

ĥb\Ug'fla cĥ'ei YWbWMLa 'YggYghfa ]bUg'C YbWbfc XYfla cĥXYŪbY  
i a 'bCei YfWbgXYfXc i a 'UbWghU\|dch]W'Xc [ fi dc XYŪb]Xc dcf  
Ūei YYbCEv 'ja dcfhUbhfYggUhf'ei YWXC|fla Ug'fydfYgYbLā \|dCNgYg  
g'fYUŪc|Yb]UXYi a 'fi dcžci 'gYŪz-b'f'g UŪc|Yb]UfYU'Yg UcV!  
ĥb, ~c' XdYbXY'Xc' a f'cXc' i g'Xc' bUUbz'lgY'

B UVchb]WZUdUfMā ' b]Uz|c' dcf]bWdU'W]h]f|c' i ĥ]nUXc' Ya 'Uz'lgYg  
WXC]Wg'Uhf' a YXCg'XY% - S" GY| i bXc' c' W]h]f|c' XY dUfMā ' b]ŪX]UbhY  
XYXi Ug'ci' a Ug'Uhf]bUj Ug'Yei ]j UYbhYghā Ūc|Yb]ŪWXC|fla Ug'Wa  
ĥdc'c| ]Ug'X]gh]h]zUa Ug'gla d'Yg'f'Uei Ya Y\cf'Yl d'W]Ucg'XUCg'  
9a Ūc|Yb]Ūzi a UUh]bUj Ua Ug'dUfMā cb]cgU'f'Ūei YUei Ya ]b]a ]nU  
c' b•a Yfc' XY\|dCNgYg' ]bX'dYbX'bhYg'f'Y'\ca cd Ug'Ug' Wbj Yf| . bWŪz  
dUfUY]ga cĥci' fY' Yg' Yg'dUfUY d'W]U'X]g]f]M ] , ~c' X]gh]Ug'z'cfa U" Yg'  
XYg'UXc'g'XYWUWYg'5 dUfMā ' b]Ufzdcf]h]brczi a dcf]bW]c' C]E]Wz-b'  
evolutivo (Platnick & Gaffney 1977, Farris 1995, Kluge 1997).

v Wa i a 'ei Ybz'lgYei Yhb\Uā 'Wa c' W]h]f|c' UdUfMā ' b]UybWb!  
hfYa 'a Ug'XYi a 'WXC|fla U]]i Ua YbhY dUfMā cb]cg'g'I a Uz'cfa U•ĥ'  
XY'Yl dYgg'f' Ygg'g'X]ZfYbhYg'\|dCNgYg' f'UfU' f'g'XY'z'f' cfYg'XY'WbgYbg"  
9l ]ghā 'X]ZfYbhYg'h]dcg'XY'cdYU" Yg'dUfUW'W'U'z'f' cfYg'XY'WbgYbg"  
Dcf'Y'Ya d'c'z'f'j' cfYg]]i Ua YbhY dUfMā cb]cgU'g-c| YUa YbhYg]b]h]n]U]g'  
Ya i a 'WbgYbg' Yg]h]c'z'hc'c| ]Uei YfY'f'a ŪYb]Ug'cg'WXCg'dfYg]bhYg'  
Ya ĥX]g'Ug'z'f'j' cfYg'a Ug'dUfMā cb]cgU'g'ā f'j' cfYg'dci W'a Ybcg'dUfMā c!  
b]cgU'g'bc Ybh]brcz'dcXā ' ]bX]W'f'YU" Yg'a i ]ĥ' X]ZfYbhYg'5 'ZU| ]X]UY  
Ūā dUfYbhY'Xc'g'f'Yg' ĥXc'g' YbZ]h]rci 'U]a dcf]bW]UXY'Yg]h]a Uj Ug'dUfU  
g'gh]bU' ~c' Xc'g'WXCg'5h' Ua YbhYz'cg' ]bX]W'g'XY'g' dcfh' a Ugi ĥ]nUXc'g'  
g-c'c' Vc]gh]Ud'f]l' Yg'Ybg]M]b% , ) ĥzei Yg]h]a UUWbŪb, UXc'g'WXCg'Uf]j' f'g'  
XY'f'Ūā cĥf]U' Ybg'Xc'g'df]C]f|cg'XUCg'Yc' ]bX]W'XY'X]W]a Ybrc'ci' ]bX]W'  
XY'6f'Ya Yf'fbf'Ya Yf'%, , ž% - (ĥzei Y ]bX]W'c' b•a Yfc' XY'dUg'g'Ua Ug'  
bYWggz]c' dUfUW'Ud'f'c' WXCz']Y'ĥcfbz!'c' i a Udc' ]ĥca ]U

9gh' Xcg' Ūc|Yb]h]Wg' Vg'UXc'g' Ya 'XUCg'a c' W'UfYg'U a Ybh]Ūā  
dfc|fYgg] Ūā YbhY'bc' ŪbU'Xc'g'Ubcg%, S"9bhY%, - Y% - %žY'g'z'fYdfY!  
g]bh] Ūā 'a Ug'X]Ua YĥXY'Xc'gh]U\cg'Ūc|Yb]h]Wg'f]b'cbc|\i Y% - (ĥzY  
Ūi Ua YbhY'Xca ]b]ā Ug]ghā zh]W] Y|YU"5 gZff]Ūā Ybh]g'X]g'dcb]j' Yg'dUfU  
Uz'lgYg'a c' W'UfYg'c'ZfY'Wā 'U'Ygg'Y'hd'c' XY'XUC' Uj Yg]h] ]X]UY' dfz]h]W  
bYWggz]Ud'f'Ug' dYf'X]ŪW'X]UY'Z'f'ei Ybhā YbhY'Wb]f]U]g'Ya Ygh' Xc'g'  
Ūc|Yb]h]Wg'8 YbhY'YUg'ZU]h]UXY'fYg' i , ~c'ci' XY'g' dcfhY'dUfUcg'WXCg'z'  
g'Y'dYc' Yl' Wgg'ci' dYUZ]h]UXY'j' U]U' ~c" B Ygg'Y'Wg'z'U]U] , ~c' XY'WUW  
h]fYg'U'Uz'lgY'XY'f]Y' Yg'Wā 'ĥU' Ug'XY'g' Vg]h]i ] , ~c' X]ZfYbhYg'ci' Ūz'lgYg'  
a Ug'g'Ybg]j' Yg'Ūc' g]bU'Ūc|Yb]h]W' dcXā 'fYdfYg]b]f'g' i , " Yg'YU'W'Yg'

5 dUfMā ' b]UdcXY' a cĥf]U'g'Y' ]bWbg]gh]bhY' Ya 'z'f' cfYg' Wā 'Wā !  
pimentos de ramos desproporcionais. Nesses casos, a probabilidade de  
a i X]b, Ugg]a i ĥ]bYUg' ]bX'dYbX'bhYg'Ya Xc]g'flā cĥ'cb|cg'XYi a Uz'f' cfY'  
dcXY'g'f'a Ucf'Xc'ei YUXYi a U•b]W]a i X]b, UYā i a 'g]Y' a Ybrc' d'Yei Ybcz'  
Y' ŪbXc' { 'UfU' ~c' XY'flā cĥ'cb|cg' C' i 'g'YŪz'UdUfMā ' b]U' ~c' g'Y'UX'ei U

## 5

UWggYa`ei YUdfcVUW]XUXYXdUfUY]ga cgYa`fla cg`cb[ cgfa Ucf`  
ei Yi a`•b]W`Yj Ybhc`Ya`i a`fla c`Wflc`fl Yg`bgh]b`%+, E'

9bWbhfUf Uzj cfYWffYUdcXYXdYbXf`XU]bWfdcfU`~c`XYa cXYcg`  
g-c YUvcfUxcgUdUfhf`XYdUX`" Yg`XYg`Vg]hi ], ~c`c`Vg`fj UxcgbUbi fYnU`  
Por exemplo, a estrutura molecular do DNA torna a probabilidade de  
hUbg], " Yg`fj Vg]hi ], " Yg`XYdi f]bUg`dcf`di f]bUg`ci`XYdf]a`X]bUg`dcf`df]a`  
]a`X]bUg`La`Ucf`Xc`ei YUXYhUbg`Yfg`Yg`f]i f]bUg`dcf`df]a`X]bUg`ci`c`]b`  
j`Yfg`E'FY] ]" Yg`WX]UWbhg`g`dcg`La`Ybh`g`VfYg`f], " Ygg`Yfj`Ug`zcg`g`Ya`  
[ YfUa`Ybh`YU`Ug`XYg`Vg]hi ], ~c`a`YbcfYg`Xc`ei YUg`b-c`WX]UWbhg`Yei`Yz`  
dcf]Ubcz`b-c`]bU`YbW]a`c`Zb`C]dc`"C`a`Yga`c`df]bW]c`Y`d`]Wdfei`Y`  
a`i`HU`" YgbUhfV]fUWgYXc`W]cb`XYi`a`UfY] ]-c`WX]UWbhg`Z]`YfUa`Ybh`  
a`i`HU`" Ygg`b`]a`Ug`dcf`b-c`UhfUfYa`c`La`]bcz`W]c`WX]UW]c`z`g-c`a`Ug`  
ZfYe`Ybh`g`Xc`ei`Ya`i`HU`" YgbUdf]a`YfUYbUg`]i`bXUdcg], ~c`Xc`W]cb`"

C`W]hf]c`XYa`zl`]a`Uj`Yfcg]a`]`Ub, Uz`]`]bhc`X`n]Xc`f7]U`]Gz`fnU`  
9Xk`UfXg`%`\*\*]bUg]Ya`zh]W]Wa`c`a`Yc`XY]bWfdcfUf`a`cXYcg`Y`c`i`hj`cg`  
bUg]Y, ~c`XYzj`cfYga`c`YW`UfYg`C]a`Ug`9gg`Y`W]hf]c`U`U]UdUfVUW]`]  
XUXYXcgXUXcg`Vg]fj`UxcgUdUfhf`XYi`a`i`cXYc`Y`c`i`hj`c`YUj`Uf]U`~c`XY`  
g]i`g`dUf]a`Yfcg`5`]\d`C]g`Y`Uc`]Yb]h]W]Yg`W`]\XU`f`Uei`Y`Uei`Ya`U`]a`]nU`  
UdfcVUW]XUXYXcgXUXcg`9gg`Ya`f]c`Xcz`bc`Ybh]brcz`Y`]Y`c`W]W`c`XU`  
dfcVUW]XUXYXc]Xg`Ug`zj`cfYg`dcg]g]`Yg`z`h`c`f`b`U`Xc`g`Ud`]W]~c`Wa`!  
di`h]W]cbUa`Ybh`]bj`]z`Y`a`Yga`c`dUfUi`a`b`•a`Yfc`fYX`n]Xc`XYhfa`]bUg`

5hf`c`]b]M`c`XY`&SSSZ`Uz`]g`Yg`Uc`]Yb]h]W]g`]bW`]bXc`a`cXYcg`Y`c`i`!  
hj`cg]U]M]Ua``]a`]h]X]g`U]U`]cf]h]a`c`ga`Ug`]f`cg]Y]fcg`B`cg`•`h]a`cg`Ubcg]bc`  
Ybh]brcz`Uz`]g`Yga`Ugg`Ug`]W]L`g`d`Ug`Uf]a`U`i`h`]n]f`U]b]Zf`b]W]U]h]g]U]b`  
5hf]j`fg`X]g`7UX]U]g`XYA`U`\_`cj`A`cbh`7U`f`cz`Ygg`Yga`f]c`Xcg`W]Y]Ua`U`i`a`U`  
Udfc]`]a`U`~c`XUzj`cfYa`Ugdfcj`zj`Y`dUfUcgXUXcg`Vg]fj`Uxcg`Wb]Z`fa`Y`  
c`a`cXYc`Y`c`i`hj`c`Yg]di`Uxc`dUfU]Uz`]g`Zc`Zf`Y`W]b`Xc`h]a`Vfa`c`W]W`c`  
da incerteza do resultado na forma da probabilidade posterior dos clados.  
5`X]Z`g-c`XUg]h]a`zh]W]Uc`]Yb]h]W]Ug`W]XU`{`fc`Vi`gh`n`XYa`f]c`Xcg`XY`  
]b]Zf`b]W]Uc`]Yb]h]W`Y`j`ci`Udf]cf]XUXYXU]Uc`]Yb]Ug`VfYUW]g]U]W`~c`"  
Progressos laboratoriais e computacionais permitiram que dados molecu-  
l]Yg`Z`gg]Ya`La`d`La`Ybh`i`h`]n]Xcg`bUfYW]b]g]fi`, ~c`XYUc`]Yb]Ug`Z`Y`g]i`g`  
resultados incorporados na taxonomia dos grupos. A morfologia passou,  
Ybh`cz`Ug]f`]bh]f`df]Y`XUX]U]b]h`XYi`a`U]Uc`]Yb]Udf]Y`]La`Ybh`Yg`U]Y`Y`W]XU`  
UdUfhf`XYXUXcg`a`c`YW`UfYg`[i`]U]Xc`c`g]gh]a`U]U]bUg]Y, ~c`XY`[fi`dcg`  
a`cbc`U`f]h]W]ga`YfW]XcfYg`XYfYW]b`W]a`Ybhc`h]U`cb`a`]W`"

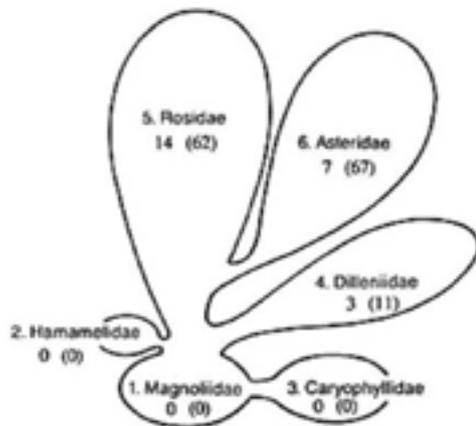
A v HC 8 C G'8 9`7@5GG=: =75uÈC

HUX]W]cbUa`Ybh]Z`UW]g]U]W`~c`XYi`a`cf]U]b]ga`c`fY]Ya`!Xg`W]V]f]c`  
Yg`UfYU`~c`Uc`]Yb]h]W]W]a`ci`hfcg`cf]U]b]ga`c`gh]a`g]Xc`Yg]h]a`XU]W]a`  
V]g]Y]a`g`Ug]Y]a`Y`Ub, Ug`]YfUg]Y`h]f]b]Ug]Z`fYU]j`La`Ybh`Uci`hfcg`Ydf`Yg]bh`  
U]bh]g`X]ei`YY]zl`cb`"5`gzj`cfYg`Uc`]Yb]h]W]g`W]b]g]fi`X]g`d`Ycg]a`f]c`Xcg`

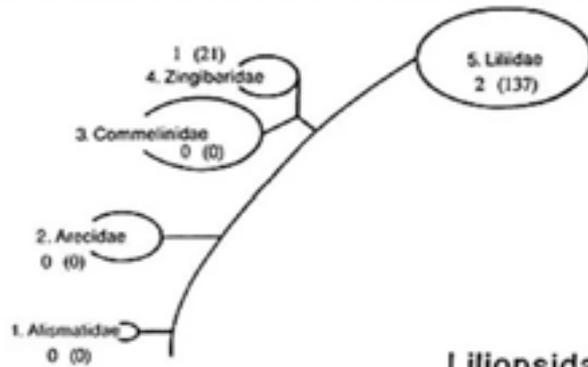
hFUX]W6bUg fUfUa Ybh' ]bW Ya 'WbgXYFU" Yg XHU\UMLg XY ]bZfa U ~c' Wa dFUX'9a j Yh X]ggzYUg fYUha 'Uj Uf]U ~c fYU]j Ua Ybh' ]bh ]h] U YUdcbXYFU ~c XY'ia [ fubXYb•a Yfc XYZUcfYg'5g'zj cfYg'fYg' hbhg' ZYe~ Ybh'a Ybh'Wbha ' ]bZfa U" Yg'g'VfYUgYe~ .bWU]bUei U'Ug'fUa ]! UW] " Yg'cWffYfUa 'YUY hbg-c' X]g'UhfU" Yg'V]c'CE]Mg'g' VgYe~ Ybhg' 9a VcfUYggUWcfXU] Ya 'hb\UdfcXi n]Xc' a i ]hcg'fYg' hXcg'•H]g'YU f V]g'XU]Ya [ fubXY dFhYbUcd]b]-c Xc' ]bj Yg] ]Ucf'g'VfYU]a dcfh]bWU fYU]j UX]j zf]cgZUcfYgei Yg-c' WbgXYFUc'gbc Yg'UWY]Ya Ybc' XUW]g' g'UW]~c" Dcf]Ubcz]b~c' f'g' fdfYbXbh'Yei Ya i ]h]g'W]g'UW] " Yg'X]g]h]g' foram algumas vezes propostas para os mesmos grupos de organismos.

7C A D5F 5uÈC '8 C G'DF =B 7 =D5 =G'G =GH9 A 5G'8 9 ·  
7@5GG= =75uÈC ·

8 =J =GÈC 'A 5; BC @-CD< M#5 #7@5GG9 'A 5; BC @-CDG=85 ·  
C' g]g]Ya UXYW]g'UW] ~c XYHU \HU]b'f%, S]f'Y h'Ya Ua Ybh'g]a Y! \U]h'Uc XY7fcb]e] ]g'h'f%, , E'5' d]f]b]W]U X]j Yf] .bW]Zbc'ei YX]nfYg'Y]h'c {g A U]bc ]cdgX]ZfYfYa !g'Y{ g]f]f]U ~c XU]g' W]g]Yf]U]i bW]XU]Z]Wa X] U]g' c]fX]bgXYdCb]h] ]U]m]h] fUXc'ei Y7fcb]e] ]g]ia U]h]fa 'Ya 'A U]bc ]XU]Z]dYU cWff. bW]UX]U'cfYg'Uc W]d]M]g'Wa 'Y]a Ybh'g'Yg] ]fUUX'g'Ya 'i a UXYU]g' ff]U]i bW]UW]U]LYUW]C]X]g'Y]bn]! ]g]c]e] ]bc' ]b]W]g]b]U]c]i h]U]d]U]j Y]U]M]U]"  
C' g]g]Ya UXYH\cfbYf% - &LY8 U [ fYb'f%, - EX]ZfYa 'g] ]b]U]W]j U mente dos dois precedentes. Estes autores preferem reconhecer superordens, mais numerosas no total, mas contendo cada uma conjuntos de ordens a U]g'W]fUa Ybh'U]bg"5gg]a zh'a cg% 'g' d]f]c]fX]bgXY8 ]W]h]YX b]Y]g]bc' g]g]h'a UXYH\cfbYfY& ]bc' XY8 U [ fYb'zX]bca ]bU]U]g'Wa 'c' g' U]c' U]b]U] f]h'c' Y] Ya d'c'z' A U]bc' ]U]b]U]Z' Fcg]U]b]U]Z' A n]h]U]b]U]Z' Y]W]E" C]i h]U]X]Z]f]Yb, U Z]b]X]U]a Ybh'U]f'ei Y]U]e]i ]b]Y]b]i a [f]i d]c' U]h]U]f'W]c'W]Xc' W]a c' g]Y]Xc' U]b] cestral direto de outro, como fazem Takhtajan e Cronquist. Thorne coloca bc' W]b]h'c' Xc' Ygei Ya U]i a U]U]d]f]c]h]U]b] ]g]c]d]f]a U]b]W]g]f]U]" C' Ygei Ya U XY8 U [ fYb' U]d]f]Y]g]b]U]i a U]z]f] c]f]Y W]f]h]U]cb]XY U]g'g' d]f]c]fX]bg' U]h] U]g' g-c' a c]g]f]U]U]g'Ya 'j ]g]U]Z]cb]U]Z'W]a c' f]U]a c]g]I' ]b]U]Y]b]g' X]j Yf] ]bh'g'" C' h]cb]W]W]a i a 'XU]z]f] c]f]Y ]b]X]W]c' a c]bc'U]Y]h]a c' X]g'5b] ]c]g]d]f]a U]g'YU proximidade relativa dos ramos atuais, seu grau de parentesco. O tamanho Xcg'VU" Yg'Xc'8 \ [ fYbc' f]U]a U]h]b]U]g]f' d]f]c]d]c]f]W]c]b]U]X]j]a Ybg-c' XYW]U]U] [f]i d]c' ]b]W]Xc'" H]F]U]U]g]Y]X]Y]i a U]W]b]Z]f]a U]~c' U]X]Y]e]i U]X]U]d]f]U]g]Y]d'c]h]f' U X]g]f]M] ], ~c' XYW]U]U]M]f]Y]g'X]j Yf]g]g]b]U]g]j z]f] ]U]g'c]f]X]bg'c]i 'g' d]f]c]fX]bg'

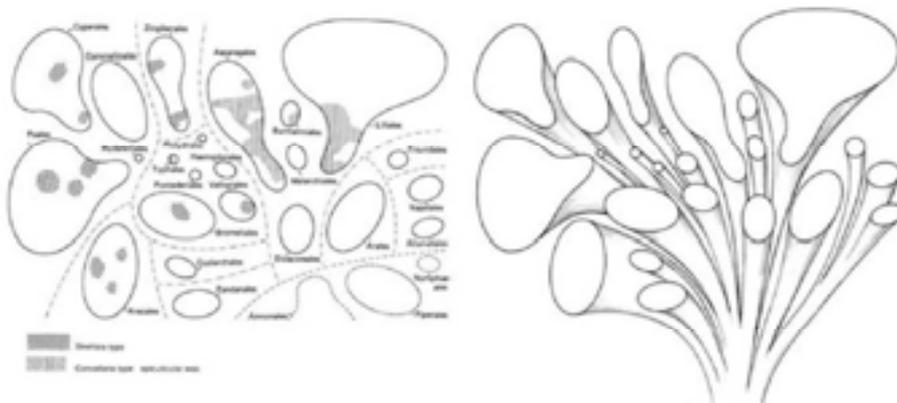


**Magnoliopsida**



**Liliopsida**

: ]i fU%&I`GjghYa UXY7fcbel ghff%\*, z%, %%%, , L'9gei Ya UXlgg dclgfyU" YgY c i hj Ug YbfYUgg WUgYU[ ]cgYfa Ug`C Hã Ub`c`Xc`VU-c`f`dfcdfVcbU`Uc`b`a`Yfc`XYglfWg de cada grupo.



: ]i fU%&I`8 U [fYbc[fUã U`c`Hã Ub`c`XcgVU" YgXc`hYhUgYf`dfcdfVcbU`UXã Ybg-c`XYWU [fi dc`]bW`Xc`

G=HI 5uÈC '5HI 5@'85 '7@5GG= =75uÈC '85G'  
5B ; =C GD9FA 5GÇ '@I N'85 'G=GH9A ãH=75'

MOLECULAR

5 ggh'Á zh]Wj Y] YU'Z]fYj c'ì VēbUXU'U• ĥa UX'AWUdYU'Ud ]WU'~c'  
XY'ĥ]W]Wg'a c' YW'U'Yg'5bz ]gYg'XY'j U]U'~c' bc' [ Ybca UX'Y'Wēfcd U'ĥc'g  
Yá 'duĥ]W'U'fZ'Y'Z'Yá 'a Ybcf' Y' ĥbg-cz'XY' g]a Ybĥc'g'Xc' [ Ybca Ubi WU'f'  
]bWYá Ybh'fUá [ fU'X'Á Ybh'bcgg' Ybh'X'Á Ybĥc' XU'Ūc' [ Yb]UX'g'd'U'bh'g'  
Yá 'ĥc'Xc'g'cg'b]j Yg'ĥU'cb' a ]Wg'5 gga žU'ggh'Á zh]WYá Yf] YW'a c' i a '  
fUá c'j ]] cfcg' XU'V'c'c' [ ]U'Y'c' i ĥj U'z' d'fcj YbXc' Ub'Y'W'g'z'f]U'd'f'g'd'W]j U  
\ ]g'U'f]W'd'f'U'U'6]c'c' [ ]U'7ca d'f'U'X'U'Y'Yá V'U'ĥá Ybĥc' Ūc' [ Yb]f]W' d'f'U'c'  
X'g'Y'bj c'j ]a Ybĥc' XY' \ ]d'U'g'Y'g'g' V'Y'd'f'c'W'g'g'Y' c' i ĥj cg''

8 UX'c'ga c' YW'U'Yg'Yá [ Y'U'd'fcj . .Yá 'a i ]ĥg'j U'bh] Ybg'Yá 'fYU'~c' {g'  
Z'cb'ĥg'ĥU'V'ēb'U'g'XY'j ]X' b'W'g'ĥU'cb' a ]Wg'ĥ' a X'c'g'c'V'ĥ]j cg'W'bh'f'U'g'XU  
ggh'Á zh]W'ĥ'Á 'g'Xc' ]b'Z'f'f'f'YU'' Yg' [ Yb]f]W'g'Ybh'Y' [ fi d'cg'XY'cf] U]g'a cg''  
I a Uj Y'nei Y'cg'X'UX'c'ga c' YW'U'Yg'f]ĥc'g'XY'f'Y'g'f] , ~c' Y'g'ēi YbW'á Ybĥc'  
XY'U'g'g'bi W'ēĥ'X'W'g'Xc' '8 B 5'Ed'fcj . .Yá 'c' [ Yb'U'ĥ'c' Xc' cf] U]g'a c'z'Y'g'  
Z'cfb'W'á 'i a U'Y'j ]X' b'W'U'a U'g'd'f'W'g'U'X'g'f'YU'' Y'g'XY' d'f'Y'bh'g'W' Xc' 'ei Y'  
dc'X'Á 'Z'ĥ'f'cg' W'f'U'W'Y'g'Z'bc'ĥ]W'g'z'ei Y'dc'X'Á 'g'f' a c'X]U'W'X'c'g'd'Yc'  
Uá V]Ybh'5' `fa X'gg'z'U'ca c'c' [ ]UX'Y'W'U'W'Y'g'a c' YW'U'Yg'f]ĥd]W'á Ybh'Y'  
a U'g'Z'U'Yá Ybh'U'W'b, UX'5'ĥi U'a Ybh'z'g'ēi Yb]UX'Y'f'W'Xc' [ Ybca UX'Y'  
Wēfcd U'ĥc'g' dc'X'Á 'g'f' U' ]g'UX'c'g' d'f'U'U'f'W'bg'f] , ~c' X'U'g'f'YU'' Y'g'Ūc'  
[ Yb]f]W'g'Ybh'Y'Z'á 'ĥ]U'g'z'cf'X'bg'Y'bj Y'g' \ ]f'z'f'ei ]W'g'g' d'f]c'f'Y'g'z'Y'bei U'bh'  
g'ēi . b'W'g'bi W'U'Y'g'XY' [ Yb'Y'g'XY'FB 5' f]V'cg'g' a ]W'g'Z'cfb'W'á ' ]b'Z'fa U'  
, " Y'g'a U'g'UX'ei UX'g'Yá 'b]j Y'XY' [ . b'Y'c' Y'Y'g'd'f'W'Y' f'f'W'X' f' i a U' [ f'U'X'Y'  
g' Vi b]X'UX'Xc' '8 B 5' W'W'U'f'Xc' Wēfcd U'ĥc'z'f'Y'g'c'bg'z'j Y'd'YU'W'X]U'W'~c'  
XU'Y'bn]a U'f]M' `cg'V]Z'cg'Z'ĥ' W'V'el ]U'g'z' ]a d'cf]U'bh'g'g'a cg' b'U'g'f'YU'' Y'g'  
XY'Ū U'~c' Xc' W'V'c'bc' X' f'U'bh'Y'U'Z'c'ĥ'g'bh'g'Y' " C'g'X'UX'c'g'c'V]X'c'g'W'á 'c'  
g'ēi YbW'á Ybĥc' XY'bi W'ēĥ'X'c'gha 'g'Xc' U'b]U'g'UX'c'g'U'ĥ]j f'g'X'c'g'f] c'f'c'g'g'  
a f'ĥc'X'c'g'W'X'g'ĥ]W'g'

I a Uz'f] c'f'Y'XY' W'bg'Y'bg' 'Y'g'f]ĥc' 'XY' - \$\$'z'f] c'f'Y'g' ]] i U'a Ybh' d'f'W'  
a cb]cg'U'z'c'V]X'g'W'á 'cg'X'UX'c'g'XY'f'W'Xc'XY' (- - Y'g'd'f'W'g'XY' d'U'bh'g'W'á '  
g'Yá Ybh'g'f'g'd'Y'fa U'ĥ'ĥ]g'z'z'c' ]di V]W'U'U'd'Yc' Y'g'z'cf, c' W'b'1 bĥc' XY'a U'g'XY'  
' , d'Y'g'ei ]g'UX'c'f'Y'g'f] \ U'g'Y'ĥiU''% - ' E'Dc'X'Á cg'j ]g' U]n'f' i a Uz'f] c'f'Y'W'á '  
' ]b\U'a cbc'Ū f]W'W'W'X'Y'U'W'á c' [ fi d'c' ]fa ~c' XY'ĥc'X'U'g'U'g'Y'g'd'Y'fa U'ĥ'ĥ]g'  
f'Y'g'U'bh'g'9a V'cf'U'a c'f'Z'c'c' [ ]W'á Ybh'Y'X'g'g'Yá Y\U'bh'g'z'cg'ĥ'f' . g' [ . b'Y'c'g'XY'  
; b'Y'U'Y'g'Z'c'fa Uá 'i a U]b\U'Yá 'a cbc'Ū f]W'ei Y'f]fa ~X'U'g'5b] ]c'g'd'Y'fa U'g'  
g'g'Y'bh'Xc' d'cf]U'bh'c'z'U' ]i a U'g' \ ]d'U'g'Y'g'V'U'g'U'X'g'Yá 'f'FB 5' Y'Yá 'X'UX'c'g'  
a c'f'Z'c'ĥ]W'g'

8 Ybh'Y'U'g'5b] ]c'g'd'Y'fa U'g'z'X' U'g' ]b\U'Y'bg'd'f]b]W'd'U'g'b'U'z'f] c'f'Y'XY'f'W'X'  
W'f'f'Y'g'd'cb'X'Á žb~c' U'c'g'ĥ'U'V'ēb'U'g' [ fi d'cg'XY'a cbc' Y'X]W'ĥ] Y'X' b'Y'U'z'a U'g'  
U'c'g' [ fi d'cg'd'f'c'X' ĥ'c'f'Y'g'XY'd'c'ēb' i b]U'd'Y'f'ĥ' f'UX'c' j Y'g'g'd'f'c'X' ĥ'c'f'Y'g'XY'd'c'ēb'  
ĥ]U'd'Y'f'ĥ' f'UX'c'g'5 gga žU'g' W'W'g'Y'Á U'bc' ]]X'Y'g'Y'bg' '7fc'bei ]g'ĥ'f'%, , E'f

# 5

dUfU' fhW'Wbhi Xc Ug'cfXybgA U bc`JUyG'Y@u fUYg'Ug' DUyC'Yfj Uj' f'Y' 5f]g'c'W]UYg'D]dYfUYg'YB ma d\UUYg'LYg'a cbcW]YX bYUg'Zfa La` Ya` Wb'i bte i a U]b\U Ya` a cbcU'fhW'a fWMLdYc dCEbi b]UdYfh fUXcz ei Yf]fa ~XYhcXUg'Ug'8 ]W]YX bYUg'dfcXi hcfUg'XYdCEb hf]UdYfh fUXcz U cfUXYbca ]bUXg'Ug'9i X]W]YX bYUg' "8 YbfY Yg'Ug' Ug'7Ufmd\mUYg' g-c`a cbcU'fhW'g'Ybei Ubc`Ug'8 ]`Yb]XUY Y< La` La` Y]XUY XY7fcbei ]gh UdfYWA`dc`JU'fhW'g'zdc]g'Wb]fa`Za`f]Ug'XY`]b\U Ybg'X]gh]Ug'XYfW@` 5gI fh]WYg'zdcf`Y Ya` d'cz]bW`XUg'dcf`Uei YU hcf`bUg`WUg'Y< La` U a Y]XUg'Yg'z'bc`WXc`FcgXUYg'bg`"Uc"

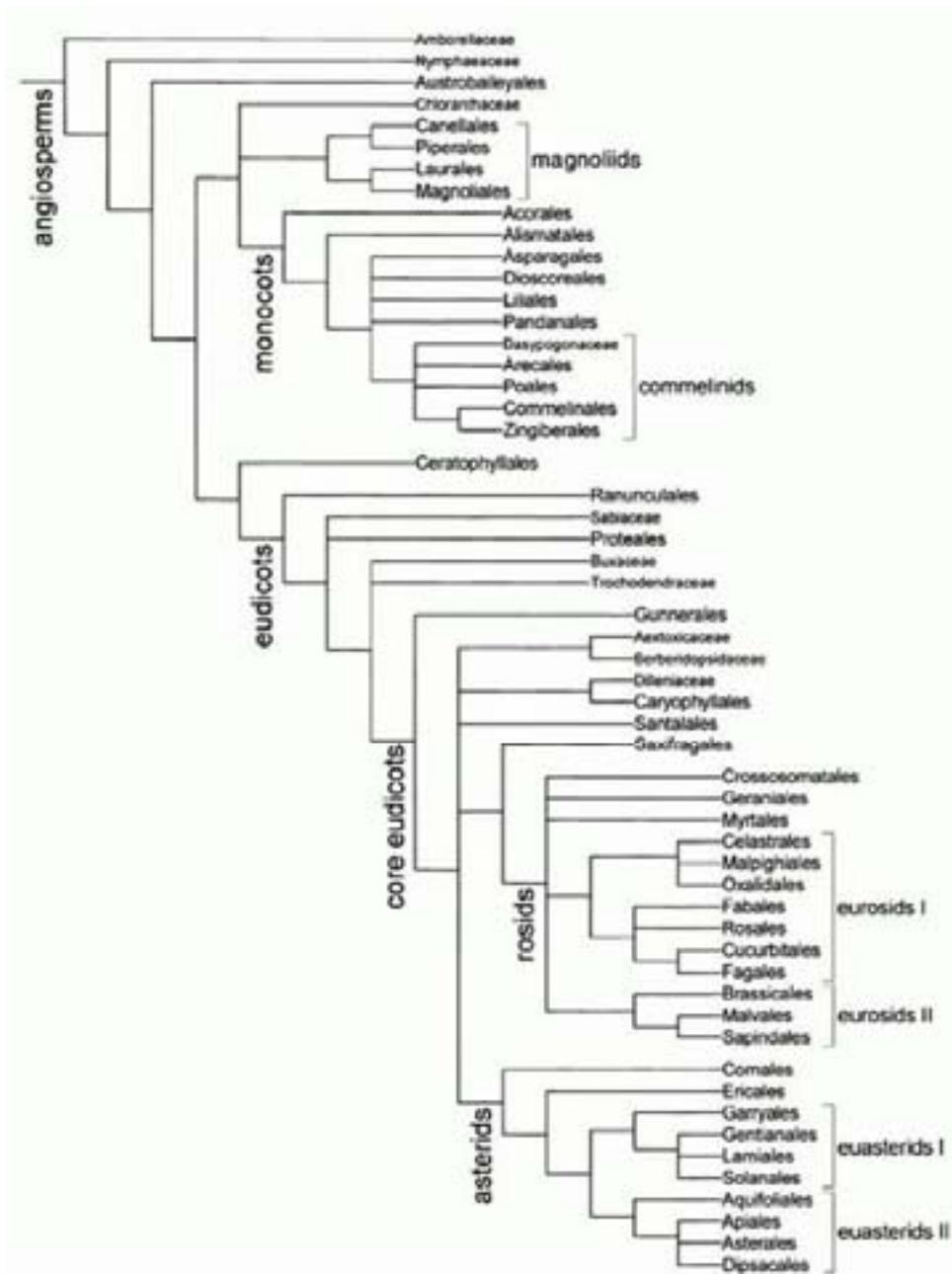
B Uzj cfYXYfW@z]hbc`c`WXc`XY5g]f]XUYg'bg`"Uc`Wa`c`Fcg! XUYg'"`Wb]fa`X] Yfgc'Y Ya` Ybhc'g-b-c`hfUX]VcbUa`Ybh'Uf]M]fXcgUYUg' Ygg'g`WUg'Yg`Wa`c`XU]XUg'dcf`7fcbei ]gha`cg]La`!g'Y dUfU'fhW'g' bYUg'g]hXc!g'Y`W]Wbg]M]`," Yg`Y dU]XUg'dUfU`ei Y`g'Y hcfb`Ya`a`Ug`Yg` hf]La`Ybh'Ya`cbcU'fhW'g'"

Finalmente, deve-se ressaltar que os dados de rbcL revelaram certos dUX" Yg'XY`Y`c`i, ~c`XY`W]U]M]Yg'a`cfZ!UbU`a`]W]g'Y`ei`za`]W]g'a`i`]hc` ]a`dcf]h]bh]g`B`cg]g]h`Ya`Ug`XY`WUg'U]W`~c`hfUX]VcbUg'z`W]hcg`W]U]M]Yg' Ya`V]c`CE]W]g'Wa`c`c`hdc`XY`bi`Wcz`Y`U`]`La`cdY]U]U`UdfYWA`Wa`c` \ca`cd`zg]W]g`U`a`]h]m]g'Y`ei`Y`h]f]La`UdfYWA`c`fYdY]XUg'j`Yn]g'Ya`a`i`]h]g` ]b\U`Ybg`Y`c`i`h]`Ug`X]ZfYbh]g`9b]h]Y]hbcz`Uzj`cfYXY`8`B`5`]b]X]W]ei`Y` Xc]g`[`f]b]X]g`W]Xc]g]fa`~cg`Yg`c`dYg'Ybh]g`X]bh]Y`Ug'9i`X]W]YX`bYUg` i`a`Wa`C]e]i`cg`h]bi`Ybi`W]U]Xc]g]f]Yz`Wa`UdfYU]g`i`a`U]W]a`U]X]Y`W]i`Ug` bi`W]U]Yg`Ybj`c`j`Yb]Xc`c`g]W`Ya`V]cbz]c`U]U]c`X]U`a`]M]C]E]U]E]Y`W]fc`U` [`La`cd]f]U]Zci`h]cg`Wa`C]e]i`cg`W]Ug]bi`W]U]Xc]g]fa`Ug`XY`i`a`U]W]a`U]X]Y` W]i`Ug]bi`W]U]Yg`Y`W]fc`U]X]U]d]f]U]5`h]Ug]f]i`dcg`W]ff]Yg]cb]X]a`[`fcgg]!` f]La`Ybh]Ug'5g]h]f]XUY`Fcg]XUY`Zf]Yg]d]W]j`La`Ybh]Z`Ya`Vcf]U]Ug`U]W]bg]h]i`], ~c` g'Y`U]W]bg]X]Y`U`Ya`Ybh]X]Zf]Ybh]X]U]W]W]bg]M]M]`~c`hfUX]VcbU`"Dcf]h]bcz`U` [`La`cdY]U]UdcXY`fYdY]g]bh]f`g]b]U]dca`cfU]X]Ug'5g]h]f]XUY`g'bg`"Uc`Y`c` dcg]Vcb]La`Ybhc`Ya`8]`Yb]X]UY`XY`W]h]g'cfXybg]La`cd]f]U]Ug`Wa`c`9f]W]Yg` fei`Y]b]W`]U]Z]a`f]U]X]U]5n]U]f]U]Z]9f]W]M]U]E]f]j]bg`g]h]bz]Y"

7ca`fYU`~c`Ucg]f]Xc]X]g]h]a`V]fa`g]f]La`~ca`cd`zg]W]g]b]Ug`W]Ug'U]M`," Yg]h]U]X]Vcb]Ug]i`a`U]j`Y`nei`Yc`W]ff]Ya`Ya`cfX]bg`W`c`W]X]g`Ya`8]`Yb]X]UY` f]lcf`Y`I`Ya`d`c`9f]W]Yg`Ybci`h]Ug`W`c`W]X]g`Ya`5g]h]f]XU]zdc]f]a`cg`X]Xc]g` XY`fW@`X]a`cg]h]La`ei`Ycg]f]Xc]X]g`fYdY]g]bh]a`i`a`Ug]b]U]dca`cfU]Xc` W]Xc`5g]h]f]XUY`g'bg`"Uc`zdf]a`]h]b]Xc`U`d]C]E]Y`XY`ei`Y`g]f]U]U]W]b]X]M]`~c` V]g]U]b]Yg]h]W]Xc]z`Wa`d]Y]X]Ug]g`V]g]ei`Ybh]g`c`W]ff]Yb]Xc`Ya`j`z]f]Ug`]b\U`Ybg` Wa`5d]U]Yg'5g]h]f]U]Yg'Y`C`U]b]U]Yg'ei`Yd]Ug]f]La`Udfc]Xi`n]f`X]Z]g]U]g]ei`za`]W]g` U]h]f]b]U]h]Ug`A`U]gi`a`U]j`Yn]Lei`z]Udf]Yg]b`U]XY`dc`]U]W]h]Yb]cg`Y`U]M]cb]U]g]g]g` ei`]h]f]d.]b]W]g`Ya`5d]U]Yg'f]W]a`U]Z]a`f]U]X]U]Y]j`U]Xc`W]Z]U]b]r]z]g]U]g]Z]W]b]h]f]c]L` Yb]U]g'5g]h]f]U]Yg]h]f]U]ei`Y`g]f`fYd]cf]h]U]W]a`c`~ca`cd`zg]W]b]U]W]Ug'U]M`~c` XY`7fcbei ]g]z]dc]g]Ug'df]a`Y]f]U]g`Yg`c`Ya`Fcg]XUY`dUfYg`Y`U`hcf`"Dcf]fa` cg]X]Xc]g`XY`8`B`5`g`[`Y]Y`a`ei`Y`5g]h]f]XUY`g'"`h]a`V]fa`]b]W`]U]g'5d]U]Yg'Y` Ybhc`Lei`Y`Yg`W]U]M]Yg'ei`za`]W]g`g`c`i`a`Ug]b]U]dca`cfU]Z]Ybei`Ubc`ei`YU`

X]U]dYU]UXY W]H]g5 d]UygfYdfYgbHf]UfYj Yfg-c UdUhf'XYi a UWbX], ~c' de gamopetalia basal das Asteridae.

5g]a žUg]ghYa zĥ]W a c'YWUf' hYa 'WffcVcfUX' c'c'a cbcU'Ygha c'XY j z]Ug]Za f]UgYcfX]bgdci a 'UXcZ]U]cbhUX' c'dcblegM]Wgci d'fcVYa zĥ] Wgei YfYei YfYa ũa d'UfYZ'fa i U-c Xcgg]ghYa UgXYW]g]UW ~c j ]] Ybh'g'



: ]]i fU% Ĩ ā fj cfYŪc] Yb]f]W]W]Xc] f]ũa ũa c]gfU]Xc] UgfYU" YgYbh'Ycg]U UXY'5b] ]cg]Yfa Ug' 5bz ]g]Zc] U]gYU]Yā X]X'ga c'YWUf'Yg]fYei .b]W]gXYf]Y] YgXc 8B 5E'G]ghYa UXYW]g]UW ~c do APG II.

## 7CB 7@I GÈC`

CggghYa Ug'XYWgg]ÜW ~c Uè`cb[c XU\g]ÜXU\i a Ub]XKYZcfUà`  
dfcdcdg'XYUWfXc`Wa`UgbWgg]XUXgXUfdCWYa`ZUW]HfULei`lg, ~c`  
do conhecimento sobre as plantas com base na simplicidade/complexidade  
YHMc`c[ ]UYI`g]hYh'8`YbhYcgj`zf]cg'ghYa`Ug`VUXcg'cgdf]a`Yfcg'Ya`  
cfXYa`W'cbc`Ü]WZcfUà`'cga`Ybcg'YUcfUXcg'Yi`a`'dci`W`Yei`lj`c`W'Xcg`  
se formos comparar com os atuais sistemas vigentes. Houve um grande  
Uj`U,`c`Ya`'fYU`~c`Ucg`W]hff]cg'Ybj`c`j`]Xcg'Yc`fYg`'hXc`ÜbU`YgdYUXc`Ya`  
i`a`'gghYa`UXYWgg]ÜW`~c`<`c`YYa`X]Uc`gghYa`UXYWgg]ÜW`~c`i`h`]hXc`  
dcf`dYei`lg`UXcfYg`Yg`i`X]cg'g'Ya`'6ch]b]WYa`'VcUgdYhYg`X]gi`bj`Yfg`!  
XUXg`VUg`Y]fUg`f`c`G]ghYa`UXY5D,`'f5`[]cg]Yfa`D`nèc`[Ybn]`fci`dZi`a`  
gghYa`Uei`Yfy`c`i`W'cbci`UWgg]ÜW`~c`Vch]b]WUè`dfcdcf`UXj`lg`c`X]g`  
Angiospermas em grupos diferentes dos tradicionais sugeridos em outros  
gghYa`Ug'XYWgg]ÜW`~c`8`YUWfXc`Wa`YgYgghYa`Ug'5b[]cg]Yfa`Ug'Yh`c`  
Xj`]X]g'Ya`'ei`Ufc`[fubXyg`[fi`dcg`'5b[]cg]Yfa`Ug'VUg]gZA`Ubc`]X]Ug`  
A`cbc`W]h`YX`bYUg`Y9i`X]W]h`YX`bYUg`'C`'5D,`'di`V]Wi`'gY`ghfUU`cgU`  
dUfh`f`XY%`-'`zhbXc`X]i`[UXc`UWgg]ÜW`~c`a`UgfYWbhYa`'888`'f5D,`  
=É`5`hbX`bWU`c`YYa`X]UWa`Ug`Uz`lgYg`Üc`[Yb]h]Wg`f`h]b]h`f`Yg`c`j`Yf`  
U[i`bg`W'Xcg'gYa`[fubXyg`g]h]h]U`]XUXY`Ya`'bj`Yg`]\Yfzfei`]Wga`Ug]b`!  
Zf]cfYgi`a`Uj`Yn`ei`YYa`'bj`Yg`]\Yfzfei`]Wgg`df]cfYgc`d'cg]W'cbUà`Ybrc`  
X]Ua`Ucf]UXcg`[fi`d'cg`z`Yg`z`g]bXc`Wbg]XfUXc`Yg`zj`Y`"



## RESUMO

Apesar da enorme diversidade vegetal nativa do Brasil, encontramos UbxUi a U ]h]fU i fUa i ]lc`d]fW]Ya`g]ghYa zh]Wj Y] YU" 5`G]ghYa zh]W f Uz]fYUXc`Wb\Y]a Ybhc`V]c`CE]W`ei Yg]c`WdUXc`Yg]i Xc`X]g]fYU" Yg] evolutivas dos diferentes grupos de seres vivos ao longo do tempo e do U fi d]a Ybhc`Y]W]g]U]W`~c`Xcg]g]fYg]j]cg`I a`g]ghYa UXY]W]g]U]W`~c` dcXY`g]f`Wb]g]fi`Xc`Wa`X]Z]fYb]h]g]c`V]h]j]cg`7UXU]i a`XY]g]h]fz`i a`df]b]W]d]c`U`cg]CE]W`Ybcfa U]j]c`X]g]h]c]z]Y]fz]Ya`df]Y]U`X]g]h]c]g]Wb]1`b]c]g` XY]W]U]M]f]g`5c`cb]c`XU`]g]CE]U]z]g]f]l]f]a`bi a`Yfc]g]g]g]ghYa`U]g]XY]W]g] g]U]W`~c]z]cg]ei`U]g]W]g]i a`l]a`g]f`U]fi`d]UX]cg]Ya`ei`U]fc`W]M]c]f]U]g`~z]V]h]c]z` U]h]U]M]U]g]z]b]h]i`f]U]g]Y]U]c]Y]b]f]h]W]g`C`g]d]f]a`Y]f]c]g]Z]c]f]a`z]Y]j]X]b]h]a`Y]b]h]z]cg` a`Y]bc]g`Y]U]c]f]U]X]c]g]Ya`V]c]f]U]g]i`g`U`h]c]f]Y]g`U]M]X]h]U]g]ghYa`ei`Y]Y]g]f]Y]U]h]i` U]b]X]X]g]b]h]i`f]U]g`B`Y]g]h]g]ghYa`U]g]z]f]c]f]Y]g]Y]f]U]g]h]f]d]U]X]f]U]g`Y]W]Z]W]b]!` g]gh]a`cg]l`fi`d]cg]d]f]b]W]d]U]g`XY`d`U]b]h]g`H]c]d`f]U]h]i`g]f]l`+S]l`&)`U]7`L`f`c` bca`Ya`U]g]W]Y]M]Y]X]g]h]d]f]c`X]c]z]g]b]Xc`W]b]g]X]f]U]Xc`c`DU]X]U]6]c]h]b]W]C`g` g]ghYa`U]g]U]h]U]M]U]g]f]g]W]L]J`==`L]Y]f]a`Y]g]b]W]U]a`Y]b]h]d]f]z]h]W]g]Z]W]a`d]c]i`W]g` W]U]M]f]Y]g]Y]b~c`Y]j]U]a`Ya`W]b]h]U]g]U]b]X]X]g]Y]b]f]Y]c]g]c]f]U]b]g]a`cg`9]l`" sistema sexual de Lineu (1707-1778). Classe 21: Monoecia: Typha (taboa-monocot.), Quercus (carvalhos, eudicot.) e Thuja (tuaia-gimnosperma). C]g]g]ghYa`U]g]b]h]i`f]U]g]f]g]W]L]J`==`Y]L`=]L`V]i`g]W]U]a`U]b]X]X]g]i`b]h]i`f]U]g` Y]b]f]Y]c]g]l`fi`d]cg]z]g]l`i`b]Xc`i a`d`U]bc`X]j]b]c`"I`h]i`n]l]a`i a`b`a`Y]c`a`U]c]f`XY` W]U]M]f]Y]g`@]a`U]W]Z]6]Y]b]h]U]a`/`<`cc`\_`Y]z]8`Y]7]U]b]Xc`~`Y]z]i`g]g]Y]i`"8`i`f]U]h]f`c` U]j`Y]b]c`Xc`I`8`U]k]b]g]a`c]i`"C]g]g]ghYa`U]g]U]c]Y]b]f]h]W]g]f]g]W]L]J`=]L`U]h]f`c`Y]L` V]g]U]X]c]g]b]U: `=@C;`9]B`~5`X]c]g]l`fi`d]cg`~]g]CE]W`XY`f]YU" Y]g`XY`h]z]c]b]g` f]Z]a`f]U]g]l`b]Y]f]c]g]Z]Y]g]l`M]g]z]c]d]i`U" Y]g]Z]Y]W]U]f]U]j]g`XY`U]b]W]g]f]U]X]X]Y` Y]X]g]W]b]X`b]W]U]f]Y]i`j]b]Xc`8`U]k]b]e`"



## ATIVIDADES

%`8`Y]b]U]g]ghYa`zh]W]Y]H]U`cbca`j]U`  
&`: U]Ui a`U]g]b]h]g]Y]X]c]g]d]f]b]W]d]U]g]g]ghYa`U]g]XY]W]g]U]W`~c`X]g]XY]U]b]h]i`i`!` ]X]X]Y]U]h]f`c]g]X]U]g]U]h`U]g`  
'`"8`Y]b]U: Y]b]f]h]W]Y]7`U]X]g]h]W]Y]d]c]f`U]a`Z]U`U]W]a`Y]b]z]f]c]g]g]c`V]Y]U]i`h]i`n]U`~c` X]g]g]Y]g]a`f]h]X]c]g]b]U]g]W]g]U]W`" Y]g]V]c]h]b]W]g`  
(`"8`Y]U]W]f]Xc`Wa`cg]d]f]b]W]d]c]g]XY`5]b]X]Y]U]g`7]U]g]U]d]b]c`f]h]i`'`L]U]g]W]g]U] W]" Y]g]X]j`Y]f]U]a`g]f]f]i`h]M]L`  
U: z]W]g]X]Y]i`h]i`n]f`  
V: 9]g]z]Y]g`  
W: z]W]g]X]Y]a`Ya`c]f]i`n]f`  
d) Concisas`  
Y]L]H]f`d]c]X]f`XY`d]f]Y]X]l`~c`

7C A 9B Hã F=C`CC 6F 9`5G:5H=J =8 58 9G

Analise estes tópicos sugeridos por Caesalpino, faça uma avaliação do sistema de classificação vigente e informe sobre a necessidade/aplicabilidade destes princípios nos dias atuais.

DF ê L=A 5`5I @5

B Ud fCE]a UU`U]fYa cgYgi XfUga cbcWh`YX bYUzi a [fi dc WUMMf!  
]nXc Vg]Wã YbYdYUdfygb, UXfYdfygbubhgWa i a Wh]fXcbYY[f-cg  
XYdCEb`[ YfUa YbhYa cbcgg`Wkcg`

F 9: 9F â B 7=5

5D; :=5bi dXUycZhY5b[ ]cg]fYa D`nè[ Ymñ fci dWgg]ÜW]cbZcf`  
hYcfXf]g`UbXZã ]]YgcZ`Ück Yf]b[ `d`Ublg`5D; :=6chU]W`>ci fbU`cZ`  
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[ ]cg]fYa D`nè[ Ymñ fci d`7`Ugg]ÜW]cb`Zcf`h`YC`fXf]g`UbX: Uã ]]YgcZ`  
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H< CFB9Zf": "%- &"7`Ugg]ÜW]cb`UbX[ Yc[ fU`nè`Zh`Y`Ück Yf]b[ `d`Ublg`  
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