

6 ch b]WU G]ghYa z h]WU Y'9 WŁb' a]WU

Ana Paula dos Nascimento Prata



G~c '7 f]gh0j ~c#G9
2010

AULA 1

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AULA 2

Gimnospermas 41

AULA 3

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AULA 6

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AULA 10

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A vHC8 CG'9 'Hv7 B=7 5 G'8 9 ' COLETA VEGETAL EM ANGIOSPERMAS

META

Objetivo da aula é apresentar aos alunos a importância da coleta vegetal em Angiospermas, com ênfase na identificação e conservação das amostras. Serão abordados os aspectos metodológicos e a importância da coleta para o estudo da diversidade vegetal.

OBJETIVOS

- Identificar as partes principais de uma planta coletada.
- Aplicar técnicas adequadas para a coleta e conservação de amostras vegetais.
- Registrar as informações necessárias para a identificação das espécies coletadas.

DESENVOLVIMENTO

Apresentar slides sobre a importância da coleta vegetal em Angiospermas e a metodologia a ser utilizada.



Este documento contém informações sobre a coleta vegetal em Angiospermas, incluindo objetivos, metodologia e desenvolvimento da aula. O conteúdo é destinado a estudantes de Botânica e áreas relacionadas.

=B HFC 8I uÈC

9a ZWYXUj YfgXUXVch]WUhi U'YXUbyWgg]XUXYgydfYgfj U' Yfy] lgrf' U'gYgd]Wg'dfUYgi XcgZ' h fcg'f'byWgg]c' Y]bXgdYbgj Y'c' Wb\Y]a Ybc' XYh]W]Wg'UXei U]g'dfUW'YU'f'a U]f]U'Vch]b]Wz'Wb! gXfUbx' U'gXZfYb, U'gYa' g' U'gfi h fLzdcfhz'Wbg]h]WU'YW

9a 'fYU'~c' U'c' dcfh'YU'c' \zV]hcz'U'gd'U'bh'g'Ya' [YfU'dcX'Ya' g'f'W'g] g'U'W'U'g'Ya' . \YfVz'W'U'g'U'Vi g'hj U'g'U'fVcEM'g'hfYdUX]fU'g'Z'ei zh]W'g'Y'W'g'U' W'g]U'W'~c' Ya' 'fYU'~c' U'c' dcfh'#\zV]h'c' X'c' j Y]YU'f'i a' d'ci W'dc'. a]Mz' dcl'g'W'h'c'g']a]h'g'U'bx'U'~c' Y'g'~c' V'a' Y'g'U'Y'W'X'c'g' C'i h'fU'W'g]U'W'~c' W'bg'X'f'U'~c' g'a Y'bh'c' dcfh'Y'U'd'U'bh'Z'a U'g'h'a V'fa' 'U'c'W]h]U'~c' XU' gema de crescimento ao longo do ciclo de vida do organismo (RIZZINI, % - +/F5I B? =59Fz%' (U'di X; C B u5@J 9G/ '@CF9BN=ž&S+L'

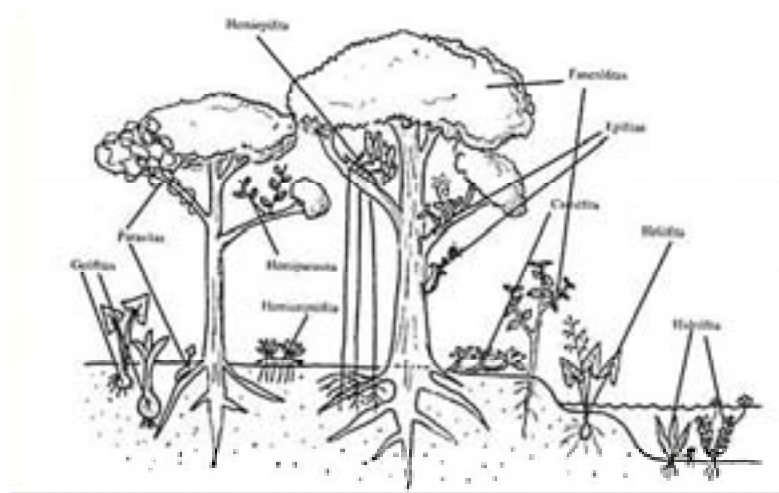


Figura 1 - Formas de vida em plantas vasculares, baseado em RAUNKIAER (1934) ĩ FY]fU'c' XY'; C B u5@J 9G/ '@CF9BN=ž&S+L'

5g\YfVz'W'U'g'dcgg] Ya' i a' U'hc' h'cf' XYz[i U'Ya' g' U'W'bg]h]i], ~c' Y' g'c' Ya' [YfU' XY' d'Yei Ybc' dcfh'Y'W'a c'z' dcf' Y] Ya' d'c'z' U'g' c'fei X'U'g' Y'cg' []fU'g'U'g' 5g'U'f'i g'hj U'g'g'c' f'U'a]U'W'U'g'X'g'X'Y'U'g' U'V'g'Y'dcgg] Ya' W'h'c' h'cf' XY']] b]U'W' ~c'z' Y'U'g'U'fVcEM'g'g'c' [Y'fU'a Y'bh']] b]U'W'U'g'f'U'a]U'W'U'g' Y'XY'a U'cf' dcfh'Y'ei Y'U'g'U'bh'f]c'fa Y'bh'W'U'X'g'5' f'a' X'U'd'f'h]W'U'f]X'U'XY'a' 'fYU'~c' U'c' dcfh'#\zV]h'c'z' d'c'X'Ya' c'g'W'U'f'Y] Ya' d'c'g'X'Y'd'U'bh'g'ei Y'dcgg] Ya' i a' U'h]W]W'X'Y'W'Y'U'X'Z'f'Y'b]W'U'Z'W'a c' U'g'6'f'ca Y]U'W'Y'f'f'ca f]U'g' [fU' j U'rg'z'a U'W'a V]f'U'g'z' U'g' 7U'W'U'W'Y' f'U'a U'g'z'a U'bx'U'W'f'i g'z] lei Y] lei Y'g'z' U'g' 5'f'Y'W'U'Y'f'W'ei Y'f'c'g']W'f]h]Y'f'c'g' X'Y'X'Y'f'c'g' Y'W'z'U' i a' U'g'Y'gd]W'g'X'Y' d'U'bh'g'Vi' V'cg'U'f'a U'f']X'U'W'U'z'~f]X'U'W'U'z'5']U'W'U'z'U'gd'U'bh'g'U'ei zh]W'g' (Mayacaceae e Hydrocaritaceae), dentre outras.



:]| i fU&I `9l Ya d`cgXYd`Uhg`Wa `dcfh`Xj Yfg. `UdUa YfUg`V\`YfzWUf7ca a Y]bUWUe`W UfVCEU`X:7UWUWU`YLeI zhWg`ZUFV gjj Ug`[L6fca Y]UWUfA`YfzWUe`

J cW`gU]Uei Y`gUg`hV]Wg`XZf`Yb]WUg`XYW`YHg`YX-c`dYc`Zhc` XgUg`d`Uhg`dcgg` fYa` U[i a Ug`WUUM`g]Wg`dYW`]UfYg3

B Ug`6fca Y]UWUz`Ug`Zc` \Ug`g-c`Xygl`a`Ybh`X]g`c`gUg`Uc`fYXcf`XY` i a` Y]`cz`Zfa`UbXc` i a`Ufcg`Uz`c`ei`YX]UW`HUUW`YHU`df]b]WUa`Ybh`U` dfYbg]`Ya` YU`YfVcf]nU`-c`Xc`a`Uhf]U"

5g7UWUWUydcgg`Ya`Ygd]b`cg`Vg]Ubh`U`U`Xcg`YX]j`Yfg`UW`Xcg`ZU`fa` XYdcgg` fYa` Vg]Ubh`z[i`UYa` g`UWbg]h`],`-cz`c`ei`YH`a`Vfa`X]UW`HU`U` \cf`UX`U`df`Ybg]`Ya``Y`Ufa`U`bh`a`Y`bh`cz`dc]g`Yg`YU`Wa` i`c`XY`z[i`Udc`Xfz` propiciar o posterior aparecimento de fungos no material depositado no < YfVz]cz`Wg`c`a`Uhf]U`b-c`hb`Ug`Xc`dfYbg]Xc`WffYH`a`Ybh`"

E as palmeiras? Para fazer a mensagem correta de qualquer material dUfU]bW`f`bc`<`YfVz]c`dfYg]a`cg`UW`b]X]V`cbf`U`a`cg`fU`Ya` i a`UZc`U` XY`efbU`Xc`VfU`c`ei`Ya`YXY,`(`W`W`a`df]a`Y`bh`l`)`S`W`U`f]i`fU`J`c`Wg` dcX`Ya`]a`U`]b]f`W`a`c`]f`Ya`cg`Z`h`f`]gg`3`DU`U`d`U`hg`Y`fz`W`U`g`ei`Y`g-c` Ya`[`YU`XY`d`YeI`Ybc`dcfh`f`Z`W`za`Ug`Y`Wa` i a`UZc`U`XY`W`ei`Y`fc`W`a`` Lei`Y`Ug`X`a`Y`bg`Y`g3

7`Uc`ei`Y`Y`]g`Y`i`a`U`h`W`]W`d`U`f`U`g`U`g`d`Y`W`]U`f`X`U`Y`g`z`c`]g`U`W`Y`H`U`X`Y` i`a`U`Y`g`d`V`Y`Y`Y`f`V`z`W`U`X`Y`d`YeI`Y`bc`dcfh`g`fz`X]Zf`Yb]WU`Y`a`U`g`g`l`a`d`Y`g` Xc`ei`YU`W`Y`H`U`X`Y`i`a`U`6`fca`Y]U`W`U`Y`ei`Y`H`a`V`fa`f`Y`f`V`z`W`U`z`i`g`U`a`Y`bh` dcf`Y`g`U`g`U`df`Y`g`b]h`f`Ya`U`[`i`a`U`g`X]Zf`Yb,`Ug`A`U`g`U`X]U`bh`z`]f`Ya`cg`Y`l`d`]W`U`h`W`]W`X`Y`U`U`X`l`a`Y`bh`z`a`Ug`bc`Y`bh`U`bh`z`c`ei`Y`j`c`W`g`d`f`W`g`l`a`Y`j`U`f` Ya`W`bg]X`f`U`-c`f`ei`Y`z`U`fa`X`g`U`g`d`Y`W`]U`f`X`U`Y`g`V`U`U`g`U`bh`f`]c`fa`Y`bh`z` U`[`i`a`U`g`Z`a`f`]U`g`X`Y`d`U`hg`]f`-c`U`df`Y`g`b]h`f`U`[`i`bg`W`U`U`Y`g`h`U`cb`a`]W`g`]a`dcfh`U`bh`g`ei`Y`X`j`Y`f`-c`g`f`a`U`bh`X`cg`Y`Y`g`U`f`W`bh`X`cg`b`U`l`a`cg`f`U`d`U`f`U` ei`Y`dcgg`l`a`cg`]X`bh]U`W`f`Y`g`Y`a`U`hf]U`W`ff`Y`H`a`Y`bh`bc`Z`h`fc`"J`l`a`cg` U`df`Y`b`X`f`i`a`d`ci`W`g`V`Y`Y`g`U`g`h`W`]W`g`X`Y`W`Y`H`z`d`f`Y`bg]`Ya`z`a`cb]U`Ya`` Y`W`U`U`f`g]W`g`Y`g`W`U`W`g`X`Y`U`[`i`a`U`g`Z`a`f`]U`g3

5 W'YUXY'a Uhf]U'Vch]b]W'Xj Ydf]cf]nf'g'a dFYUei U]XUXZdfc!
WfUbx' fYdfYgYbhfz]Hbhc'ei Ubc'dcgg] YzUg]Uf]U" Yg'dcdi 'U]cbUg'Y
gY'fYfWgU]bUg]bZcfa U" Yg'X]gcb]V]]n]X]g]ei Ubc'U'c'WZ]X]H]g'Y]X]X]c'g'
fYz]Yb]hg'U' a Uhf]Uz]Yg]d]W]Ua Yb]h]Uei Y]g]ei Y]X]g]d]f]Y]M'~c'X' f]ub]h]c'
dfc'Wgg'X'Y'Y'f]v]cf]n]U'~c'f]w]f]z]W]Y]f]c'""E'

Para facilitar o entendimento, vamos imaginar uma coleta na Serra de
=H]U]U]b]U]B]5]Wc'ei Y]Ua U]cf]U]X]Y]j c]W]g'z'W]b'Y]W]U]G]ff]U]Y]g'U]g'U]g'V]Y]Y]n]U]g'
b]U]i]f]U]g]h]c'V]W]X]g'

5 'df]a Y]f]U]c]V]g]f]j U'~c'f'ei Y]U]W'Y]U]X]Y'a Uhf]U'Vch]b]W'Y]f]z'c'
Xc]V]c'ci'c'h]d'c'Xc'h]a dc'Xc'ei Y]g]Y]Z]c]f]a cg]W]a d]f]U]f]W]a' i a U]j]g]H]U]'
G]ff]U]d]f]U'U]h]f'"D]f]Y]M]U]a cg]Z]h]f]j z]f]U]g]c]V]g]f]j U" Y]g]d]f]Y]b]g]f]c' a Uhf]U]z]
carregar equipamentos etc... Vamos ver isso com mais detalhes? Para ini-
ciarmos a nossa coleta precisamos nos preparar, planejar todos os detalhes,
Y]g]g]Y'f]c'df]a Y]f]c'd]U]g]c'"



:]]i]f]U']9]I]Y]a d'c'X]Y]d]U]h]Y]X]U]j Y]Y]U'~c'X]U]G]ff]U]X]Y'=H]U]U]b]U]i' G]M]j]d]Y'
: cb]h]Y' B]U]M]a Y]b]h]c!->b]c]f]z]&&S'"

7C @9H5 '89 '9GDv 7=A 9GÌ 'D@5B 9>5A 9B HC

C']b]M]c'""
C'c'V]Y]h]j'c'X]Y'g]Y]f]Y]U]n]f]i' a U]W'Y]U]f]V]i' g]M]Y]Z]c]f]b]Y]M]f' a Uhf]U'd]f]U'
d]Y]g]ei]g]g']U]cb' a]W]g'ci' 'U]b]z]]g]Y]g'X]j Y]f]g]g' '6i' g]M]Y]Z]c]f]b]Y]M]f' d]c]f]ei Y{'
a Y]X]X]U]ei Y]U]]Y]b]h]W'Y]U]Y]]b]g]Y]U]g]U]a cg]f]U]g]bc' U]M]j'c'X]Y'i' a '\]Y]V]z]f]c'
iremos prover material para pesquisas futuras.

J'c]W]g]h]a']X]Y]U]X]Y'ei Y]h]dc'X]Y'a Uhf]U'Vch]b]W'X]j'Y]a cg]W'Y]U]f]3
D]U]b]Y]U]a Y]b]h]c'Y]Z]W]g'c']a d]c]f]U]b]h]g'J'c]W]g]d]c]X]Y]a' U]W]U]f]ei Y]U'c'd]U]b]Y]U]f]!
a c]g]i' a U]W'Y]U]b]c]g]g'c'V]Y]h]j'c'f]U]d]Y]b]U]g]X]Y]h]f]U]h]f'U]a cg]f]U]g]X]Y'd]U]b]U]g]z]bc'
entanto, vale a pena esclarecer que em uma coleta bem planejada podemos

1

h f U h f ' d c f , " Y g X Y d ' U b H g e i Y d c X f - c ' g f j l f W a c V U g Y d U f j z f] U g U c f X U [Y b g X y b f c X U z f Y U X Y 6 c h] b] W Y z f Y U g ' U b g " J U a c g j Y f U [i b g Y l Y a d ' c g 3

a) Amostras de plantas para posterior secagem, preferencialmente com duplicatas;



:] [i f U (' 1 ' 5 a c g f U g X Y d ' U b H g " 5 " 8 i f U b H U W Y U ' 6 ' 7 " 8 Y d c l g X c : d f c W g g ' X Y \ Y f c f] n U - c ' Y a c b h U j Y a " : c b h Y ' 5 " B U g Y a Y b c ! - > b] c f z & S S - " 6 ' 7 " 9 " 7 " 5 " A U r g & S S + "

V L : ` c f Y g z Z i h c g Y d f h g j Y] Y H U j U g d f Y g j U X g Y a : " 5 " 5 l ' c i ' z W c ` U + S i ` d U f U Y g i X c g U b U h a] W g /



:] [i f U) ' 1 ' 9 l Y a d ' c X Y h W] W g X Y d f Y d U - c X Y '] a] b U g \] g c ' E] W g U d U f h f X Y Z i h c g ' 5 "

9 l Y a d ' c g X Y a U m] U i h '] n U X " 6 " : f i h c f l a ~ c L 7 " D U b H e i Y Z c] i g X U d U f U Y U] n f c W f h Y U b U h a] W " 7 " 7 c f h Y f U b g Y f g U " : c b h Y ' 6 c h] b] W z & S S , " 0 : " 5 " 5 " ' 1 ' U l U X c f d U f U b z] g Y U b U h a] W ' Z f a c ' z z W c ` Y z V X c ' U Y H W Q

6 cH b]WU G]ghYa zH]WU Y'9Vt' b' a]WU

- c) Material para estudos de cromossomos;
- d) Frutos para a carpoteca;



:][i fU* Ì 7UfdchWUx< YVzf]c L]b[(E: cbH: 7Ufj U\cz&SS, "

Y.L5a cg]fUgXYa UX]fUg d]fUYgh XcgUbUh a]Wg/



:][i fU+ Ì 7c Y -c XYa cg]fUgXYa UX]fUXUL]chWUx> fX]a '6ch]b]W]Hcd]W"

(Fonte: Fonte: <http://www2.iict.pt>).

Z:LA Uhf]U' d]fUYgh Xcgei ã]Wg/
 [LA Uhf]U' d]fUUbz]gYa c`YW'Uf`Y
 \EA i X]gYg]WgYgYa Ybhg d]fUdfcd]U ~c"

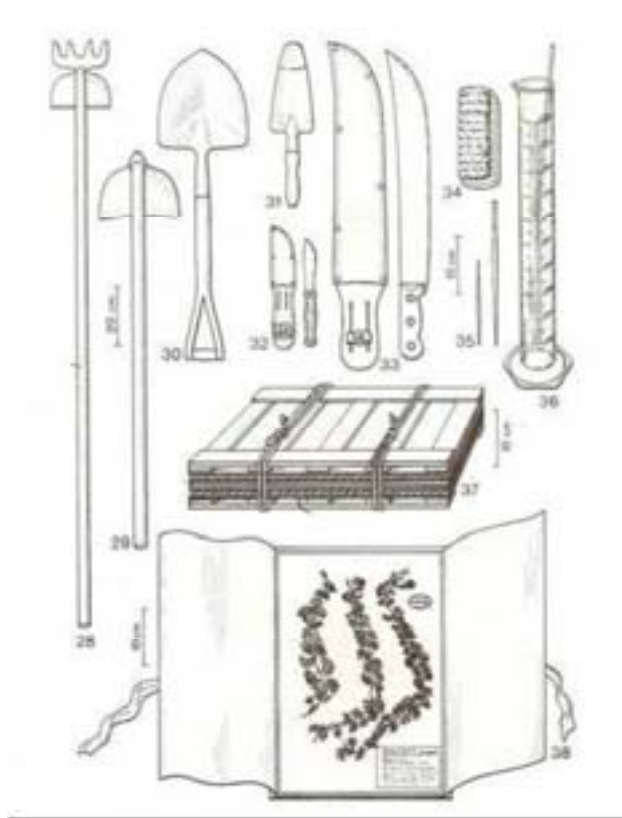
5 [cfUei Y'z' g]Wã cgei Yz'g' d]bYUfa cg'Wã 'i a Uglã d'Yg'W'YUz
 dcXfYa cghfUnf' a Uhf]U' d]fUj z]f]Ug'UcfXU]bg"8 UfYa X]Ubh'f'gEX!
 V]Xf'ei Ug'd]fhgXUd'UbU]fYa cg'W'YUf'YWã Y, Ufa cg'UdYbg]fYa 'ei Ug'
 materiais iremos levar para realizarmos uma coleta adequada.

MATERIAIS

UŁA Uhf]Ug'XYi gc dYggU'fUg'Wa c WUdfi žCW'cg'XYgc ždfchMcf'gc Ufž
fYdYbhžVchŁa cW]ŁV]bCW'cg'W] UXYdf]a Y]fcg'g'Wffcg'YVW



VŁDYbgUXYVŁa dc/UŁŁa YfcžV•gg'ŁŁa UŁUci ; DG



:]i fU, Ĩ 9l Ya d'cgXYa Uhf]Ugi h]riUXcgdfUUW'YfUYdfYbgUvch]b]WfYhfUXc XY: =85@, C
E BONONI, 1989.

W/Hgci fUXY\dcXŁ ZWcž dcX-c' YgdW]Wž Yei]dUa Ybhc' XY U]Wbg-c' e outras ferramentas apropriadas ao corte de determinada parte de uma d'Ubu\Yb\cgUci 'dUfUfYa cj Yf' i a Ud'UbuXc' gc' cžgUWgd'zg]WgYdch'g' \Yfa f]WgžfYbU]V]bC]W' cža zeI]bUZhc' [fzU]WžfzX]cg'Wa i b]W]XcfYg'YW



d) Jornais ou papel pardo de embrulho (84 cm comprimento x 50 cm largura) dobrado no sentido longitudinal;
 YŁ7UXYfbc' XYWa dc'ci 'VcW'XYU]W]g'XYW'YU/
 ZŁ@zdg'Wa i a 'ci 'WbYUXYh]bU]bXY'fj Y/

C 6G9FJ 5uÉ 9G'8 9'75A DC

8 i fUbYUW'YU]U[i a U]bZ'fa U" YgdY]W]Ła 'gYf'UbchU]g'U]bXU]Ya ' Wa dcždc'g'YU]g']fUa Ybh'g-c' dYfX]X]gbc' d'fcW]gg' XY\YfVcf]nU]~c' hU]g' Wa c' Uwf'X]g'Uc'fYg'Xcg'Zi hc'g'c'XcfYg'YW'W']bh'Ygg'U]bh'Zhc' [fUZ'f'hc'Xc' c'a U]f]U]zdf]b]W]Ua Ybh'Lei YYeI Y]g'z'Ya 'c'W'XYX]Z]W'U]W]gg' d'fU]U W'YU'5bc'hf'UZ'YeI . b]W]XU]d'U]b]Ubc' Ła V]Ybh'YŁa Vfa 'f]a dcf]U]bh'ž VYa 'Wa c' fYU]n]f' c'Vg'fj U" Yg'Ya 'fYU]~c' U]U[i bg'U]gd'W]Łgei Y'gYf~c' detalhados a seguir.

9A F9@5uÈC '5C '@C 75@

Solo:

Dependendo do local escolhido para a coleta, o solo vai apresentar U]i a U]g'X]Z]fYb, U]g'ja dcf]U]bh'gei YdfY]W]Ła 'gYf'UbchU]g' %'7cbg]h], ~c' c'Vg'fj U]f'gYc' g'c' f'U]f]cgžfYbcgž'i a Z]fcžfc'Wcgž dYfY]cgžW]W]fYc' YW' &'B U]i fYU'f]a dcf]U]bh'fY]]g'f'f'gYc' g'c' f'g'W]Ł'•a]XcžVfYcgž]bi b! X]Xc'ci ']bi bX]j YžgU]bcžU]W]bcžz]W]Xc' YW'



:]i fU- Ì 9l Ya d`cgXYW`YUa `XZfYhg`cW]XUgXYGf[]dY`5`"7Ub]bXf`XYG-c: fUWgW`
B. Pirambu. C. Serra da Ribeira. Fonte: A-C. Silva, 2006.

Tipo vegetacional

7U]b[U` 7YfUXczFYg]b[U`A UUC a VFCE`U`A UH gYa]!XW] U`
WdcYfU`zfYUW`h] UXUYW`bX]WbXc`UUh]i XYXc`dcbhc`XYW`YUa`
fYU`-c`Uc`b] YXc`a`U`fa`"ga`E`



:]i fU`\$Ì 9l Ya d`cgXYhdcgj Y`YUWcbUg`5`"FYg]b[U`6`"A UUh]b]b]W`7`"7U]b[U`
fl cblY`B U`gW` Ybhc!>b]cfz&SS`E`

Substrato/forma de vida

G[i YUgd]b]WUgZfa UgXj]XZg[i bXc UXU`b], ~c XY: cbh`i Yf%*) E`
HmfW`UgÌ J Y] YUgei Yj lj Ya`bUHffU`
GU`W`UgÌ J Y] YUgei YWYgWa`YbhYfcWUg`
Fi d]W`UgÌ J Y] YUgei YWYgWa`Ya`dyb`U`gWg`
9d]U`gÌ J Y] YUgei Yj lj Ya`gc`VfYci hfcgj Y] YUg`gYa`hfU`cg`bi`!

trientes do hospedeiro.
DUfU]h]gÌ J Y] YU`YmfCEfcZc`ei Ygy`bi hfYXY`ci hfcg`cf[Ub]ga`cg`
vivos, animais ou vegetais.

GUfCEH]gÌ J Y] YU`YmfCEfcZc`ei Ygy`bi hfYXY`Ub]a Ug`Yj Y] YUg`
a cfhcgYXY`ei Uei Yf`fygc`XYcf[]b]W`Ya`XYWa`d`cg, ~c`"

5ei zh]WgÌ J Y] YU`ei YWYgY`Wa`d`YUci`dUFV]Ua`YbhY`g`Va`Yfg`
Ya`Wfgg`X]i`U`

Luminosidade

I a VFCE`U`#C a VFCE`U`gÌ D`Ub]Ugei YdfYZfYa`gca`VU`
< Y]CE`U`g#< Y]CE`U`gÌ D`Ub]Ugei Y`cVf[]U`cf[]a`YbhY`WYgWa`g`VU`
luz do sol.

9A F9@5uÈC Ç'D@5B H5

Dcfh#\zv\hc

9fj ŹŹVi gr'ci 'g' VŹVi gr'zŹfj cfYŹzŹfj cfYŹfYdUXYfUYWZ]bX]WbXc' as medidas aproximadas, principalmente a altura.

ê f[-cgj YĵYUj cg
FUĥn b-c \z'fYZf. bWZUb-c'gY'ia 'ĥdc YgWU
7U Y'ĥM ĥi fUXUWgWZ WfZŹfca Uei UbXc Z'f'WUWf'gĵW'
: c\U'cVgYfj Ź'UWbggh bWZ WfZ\YŹfcÚ]Ź UŹgMbWZŹfca U



:][i fU%đĭ '9l Yá d'cgXYŒ[-cgj YĵYUj cg'5''7U Y'6'': c\Ūg'7!8''FUĥn'': cĥY' BUŹMá Ybĥc! →bĵcfz&SS "

ê f[-cgfYdfcXi ĥj cg
: `cf. Wf'XŪg'XZfYbĥg'dŹfĥg'cXcfz'gĶ c''-bŪcfYgMbWU
: fi ĥc. Wbggh bWZĥdcz'Wfz[fŹ'XYa Źi f]XUXY



:][i fU%&Ĭ '9l Yá d'cgXYŒ[-cgfYdfcXi ĥj cg'5''Ūcf''6!7''-bŪcfYgMbWŪg''8'': fi ĥcg'': cĥY' BUŹMá Ybĥc! →bĵcfz&SS "

9|bcVch]b]W

Nome popular, utilidade para a comunidade local

PROCEDIMENTOS DE COLETA

v`|bX|gdYbgj Y`W`YHf`cg`Ygd]Má Yg`h-c`Wa d`Yrcgei Ubr`dcggj Y`"
DFUUYUW]b]WUXU]Xbh]UW -czUÚcf`fUVg`i Hã Ybh]b]Wggz]UÚgja`
Wa c`cg`Zi hcg`fci UbXc` \ci j YfZdc]g`gã` YggYg`Yã Ybrcg`f`ei Ugy`ja !
dcggj Y`fWffYf`Uei Ugei Yf`gdã Ug`XYWUg]UW -c`Yi]gh]bh]g`ã` ei YU
Úcf`U]i fUWã c`c`CE] -c`ã Ug]ã dcf]Ubh`

O material coletado deve ser preferencialmente prensado e depositado
na estufa no mesmo dia da coleta. No momento da coleta, lembrar de
lra Uf`bchUg`VfYU]i bg`Ug`YMcg`XUd`UbHUWa c`Wf`XUg`ÚcfYg`YZi hcg`
WY]fcz`dfYgb, UXY`d.`cg`bcg`CE] -cg`XUd`UbH`Uhi fUXUd`UbHU`Yci hfUg`
WUM]f]g]Wgei YdcXã` g`f`fYj`Ubhg`9ggYg`XHU`Ygg-c`XYi hfã Uja !
dcf]b]WUbc`dfcWgg`XY]Xbh]UW -c`Vch]b]WãYa i]hcg`XY`YggY`dfXã`
UdCg`UdfYbg] Ya #g`W] Ya Xc`ã Uhf]U`WbZ`fa YZc]`WUX`Ubhf]cfa Ybh`
5`fa`XUg`WUM]f]g]Wg`WUXUg`ci hfcg`XHU`Yg`Xj`ã` g`f`Ubc]UXcg`
I`ã UXg]W, -c`XHU`UXU`g]hg`XUcg`Yb]Wbh]Ug`Ybc`dUb`Úrc`Xc`<`YfVz]c`
XU`bj`Yfg`XUXY: YXfU`XYGf]`jdY` 5`G9z`Xg]c]bj`Y`bU]bh]f]b]hbc`g]i]bh`
YbXfY, c.`\hd`##k`k`k`i`Zg]V`#ã`i`g]i`g#`YfVU]c`#`ci`bUd`UHZ`cfa`Uã`ccXY`
HFU]bXc`!g`Y`XY`d`Ub]g` \YfV`WUg`f`Wbj`Yb]bh]W`YHf`c`Yi`ã`d`Uf`
]bh]fcz`dc]g`UX]g]c]g, -c`XUg`fU]g`Xj`Yg`f`c`Vg]f]`UXUd]fU`WUg]UW -c`"



:]]i fU%`Ì`9]ã`d`cg`XYW`YHU`XY`d`Ub]g` \YfVz`Wg`:`cb]Y`9`"G]`Uz&S`"

z' d]fU]g d'Ub]g XYa Ucf' dcfhZ W'YUf' f]a cg' Ūcf]Xcg XY Ūdfcl]!
 madamente 30-40 cm. Se as folhas de uma planta forem muito grandes,
 dcXf-c' g]f' XcVfU]g XYa cXc' ei YgY'Wbg]fj Ya]bh]fUg' ā fj cfYg'YU!
 Vi g]c'gdcXf-c' g]f' a UfW]cgYa 'Wa dcZd]fUg]fYa 'W'YU]cgYa 'ci hfUg'
 cWg' YgYUg]a 'dcXf'g]z'cMf' ŪcfYg#ci 'Zi hcgXY fdcWgX]ZfYbhg'



:]]i fU% ĩ '9l Ya d'c' Xyi H]nU -c' Xc' dcXc' d]fUW'YUf' a Uhf]U Z]fh] 'XYz]f cfYg': cbh' 9"7"5"
 Matos, 2007.

Flelec"

Rrcpc"ó" Fk /ug"fc"
 gur²elg'qpf g]f'qtgu"
 estritamente mas-
 culinas e estrita-
 mente femininas
 ocorrem em indi-
 x'f wqu'ugr ctcf qu0

C' a Uhf]UXYz]f cfYdcXfz]f]fU'Wa dU'UXc' Wa 'Ua cg]fUgXUfYg]M] U
 Wg]W'GY\ci j Yf X]ZfYb, Uga UfWbh]gbc Ugc]M'c' X]gZ' \UgXUWg]YXUWdUY
 Xc'zd]WZ]a cg]fUgXY]a U]gX]f Yf-c' g]f' W'YU]g'E i UbXc' cg]f]a cg'Z]f]MgZ'
 XYi a UX]f]a]bUX]g]d]M]Z]d]fYg]bh]fYa 'WfU]M]Yga cfZ' Ū]WgX]ZfYbhg'
 XcgYg]f]g]a VcgX]f Ya 'g]f' W'YU]cg'E i UbXc' Ud'Ub]f X]Q]M] deve-se
 coletar material de ambos os sexos.

: fi hc'ga i]hc']fUbX]gZ'W/UdfYbg] Ya 'f X]Z]M]Z'XY] Ya 'g]f' W'cW]Xcg'
]bh]f]cgYa g]WgX]Yd]d]Y { d]f]h]Z'Wbg]fj UbXc'cg]bh]f]cg]d]fUUM]dch]W'



:]i fU% Ì 9l Ya d`c XYZi k` [fUxYfUdi WU]E`
(Fonte: Http://2.bp.blogspot.com).

5gd`UbHg`Xg]bUXg`Ui a UUbz`lgY`ei ða]WdcX`a `gf`W`YHUXg`Yg`
hfYg`Yc`dYc`Xc`a Uhf]U`XYWUX`Ygd]WY`Xy`Yfz`gf`g`dY]cf`U% ["v`
]a`dfYg]bXj`Y`ei`Yi`a`Ula`cgfUZfh`Xc`a`Yga`c`a`Uhf]U`Ya`ei`YZc`]Z]HU`
UUbz`lgY`gYU]bWfdefUXUc`UMj`c`Xc`<`Yfvzf]c`"

8 Yj`Y`gY`W`YHf`XY` U` Ua`cgfUg`XYWUX`Ygd]WY`Xya`cXc`ei`YgY`dcegU`
usar alguma para exame detalhado, outros como tipos a serem conservados
ci`U]bXUdufUdYfa`i`HUXYX`d`]WUg`Wa`ci`hfUg]bg]h`],`"Yg]Wbh]UMg`<`z`
Wg`g`Ya`ei`Yc`b`a`Yfc`XYX`d`]WUg`Xy`Ygf`a`Ybcfzci`a`Yga`c`b`c`Uj`Yf`
Xi`d`]WUg`zei`UbXc`gY`hUf`XYi`a`UYgd]WY`fUci`Ua`YU`UXUXY`Y`Hb`~c`"

DF9D5FC`89`D@5BH5GD5F5`C`<`9F6ãF=C

Prensagem:

C`]XU`gf]U`Yfvcf]nlf`Ud`UbH]a`YX]Ula`YbhZ`c`[c`UdCg`UW`YH]ci`
gY`UzdfYbz`!`UYgW!`UdufUa`Y`cf`dfYgfj`Uf`g`Ug`WUMYf]g]Wg`E`i`UbXc`
]gg`b`c`Zc`dceg]`Yz`Xy`Y`gY`Y`f`Ud`UbH]U]bXUZfYgWdufUU]Xbh]U`
W]~c`za`UbhbXc!`UYa`gUWg`d`zg]Wg`ZWUX`cg`dufUei`Yg`Ug`Zc`Ug`b`c`
sequem e nem enruguem, herborizando-a posteriormente. Na prensagem,
WUXUa`cgfUXY`d`UbH]f`W`c`WUX`YbhY`Zc`Ug`XY`efbUg`UHfbUX]g`Wa`
Zc`Ug`XY`dufY`~c`"C`Wb1`brc`X]g`Ua`cgfUg`f`W`c`WUX`YbhY`Xi`Ug`dfYbg`g`
XY`a`UXYfUYUa`UfUX`Zc`fh`a`Ybh`Wa`WfX`Yg`fyg]ghbhg`"

! g Y U d U b H U f d Y e i Y b U Z W c W f j z f] U g b U a Y g U Z c ` \ U

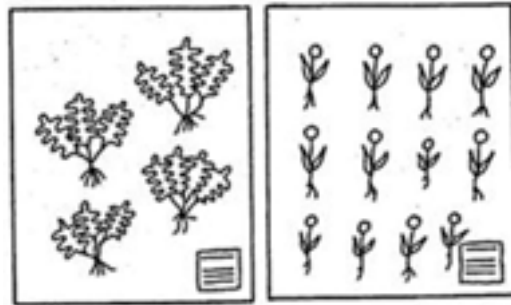


Figura 17 - Retirada de LIESNER, R. Field techniques used by Missouri Botanical Garden.

! U f f i a Y U g d U b H U g X Y Z c f a U e i Y U g X i U g g d Y Z W g X U g Z ` \ U g Y X U g Y g
 truturas reprodutivas possam ser observadas;
 ! d f Y b g Y U [i a U g U c f Y g U W f H g z c i h U g Z W U X U g Y c i h U g W a U g Y g f i h f U g
 f Y d f c X i h j U g { ' a c g f U
 ! W g ` \ U U g c a Y b h i a U • b] W Z ` \ U [f U b X Y X i g d c b j Y z X c V f z ! U X Y Z c f a U
 que as duas faces possam ser observadas;

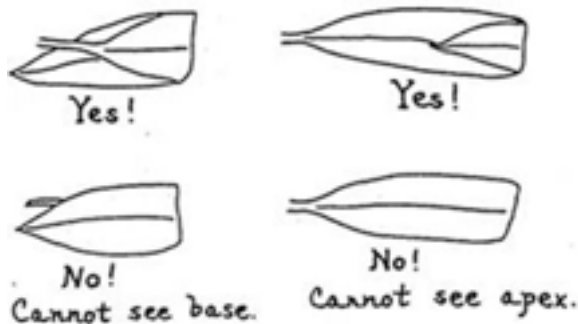


Figura 18 - Retirada de LIESNER, R. Field techniques used by Missouri Botanical Garden.

! ` b - c ` W W f U U g Y g f i h f U g f Y d f c X i h j U g X Y g U U a c g f U W a ` U g Z c ` \ U g
 Coloque-as acima das folhas;

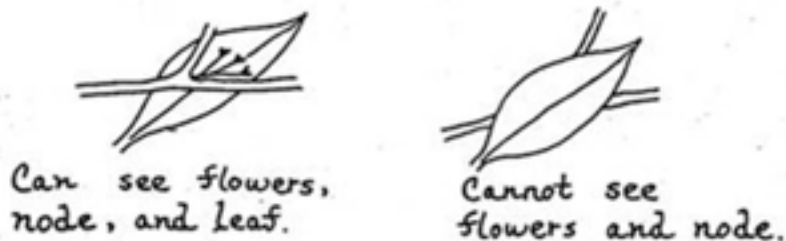


Figura 19 -- Retirada de LIESNER, R. Field techniques used by Missouri Botanical Garden.

! fYHfYc Yl Wgg XYZ \UgXUa cgfU Bc YohUbczXYl Yi a dYXUc Xc dYXc { a cgfUdUfUcVgYj U-c XUXgclcg, ~c Zc]lf/

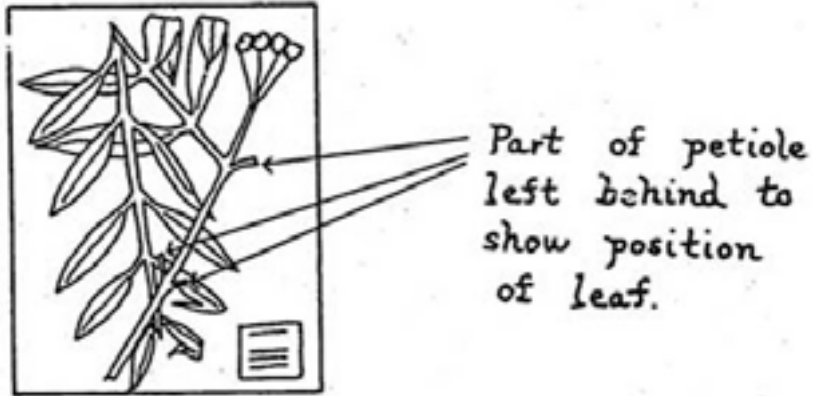


Figura 20 - Retirada de LIESNER, R. Field techniques used by Missouri Botanical Garden.

! hfa]bXUa cbHj Ya XUdfYbgZwCwGyc a Uhf]U bUYgh ZU+SS7 dcf i a hA dc a fXc XY S) X]UgXidYbXbXc Xc hdc XY a Uhf]U 5dG YghgVWw X]UgUhf UdYbgUdUfUWWf c ei Yz Ygz gWzdfcbh dUfU gYf fYhfUc 5ei YYa Uhf]U ei YUbxUYghj Yf a]XczXYl Uf bUYgh ZUhf que esteja completamente seco. ! 5dG UgU XUYgh Zzc a Uhf]U Xj Yz gYf]XbhUWwczXY]Xa YbhY Yhei YhXc Y]bWfdcfUc Uc Uhf]U c C < YVzf]c 5G9 hA g UgdUfUg fY fUg XY]bWfdcfU-c XY a Uhf]U ei Y Yghc X]gclcbj Yg bc gY i]bhY YbXY, c. \hd.##k k k'i ZgV#a i gY g#\YVU]c#



:]i fU%&I 5!6"9l Ya d'cgXYdfYgU Ya XYa Uhf]U 7"DfYbgZdUfY YgWbffi [Ucg": cbhY 5"9"7"5"A Urcg&SS+"6"B UMa Ybrc!>b]cfz&SS-

Secagem:

FYWa YbXUgyUi h]nU ~c XYygi ZgdUfUei YUgLa cghUggYei Ya `a Ug fUd]XLa YbhYYX'Ya UbYfUi b]Zcfa Y'7ca]ggzYj]HgyUWbhLa]bU~c'dcf' Z b[cgY]a]bUx!gYhLa Vfa `dcgg] YgdUfU Ugei YUWa dU\Ya Ugd'UbH'g 7ca fYU~c {gYgi Zgd'cX'Ya gYf { VUgYXYfyggh.bV]Z' |a dU]Ugci ` U]zg'BUZHUXYggYgfYWM'g'gzi a UgYWM'Ya `bUi fU'dcX'Y'gYf'ja dfcj]g'XU' c'a Uhf]U'dfYbg'Xc Xy YUMF'Ya `cW'Ybgc'UfUXczj Ybh'UXc'ci `dfCE]a c' XY'i a UZ:cbHYXYWcf"C'g'cfbUg'•a]XcgXy'Ya `gYf'f'cW'XcgX]U]La YbhZ YUdfYbg'Ub~c Xy YUMF'g'Vc'gYfbc'dUfUY]Hf'ei Uei Yf'WbhLa]bU~c"



:]i fU&&I' 9l Ya d'cgXYygi ZUXy'gW]Ya `X'Ya Uhf]U'Vch]b]W'"5"9gi ZU]bX'gfU'"6"Ygi ZU de campo.

< YfVcf]nU ~c.

C `a cXc XYdfYdUfU'Ugd'UbH'ggYWM'Xc!UgYbhYUgdYbg'Ug'f'gla d'YgY UdyUg'f'Yei Yf'i a `dci W'XYdUW'bWU'5WbX]VcbUgY'W]Ua cghUbi a U Zc`UXY'cfbU'Xc'fUXc/UgZ`Ug'gf~c La UfUX'g'bUdfYbg'UYy'gU'Yj UXU para uma estufa.



:]i fU& I' 9l Ya d'cgXYdfYbg]Ya #\YfVcf]nU~c'X'Ya Uhf]U'Vch]b]W'"

9a 'Yl Wfg' Ygfzd]Xlgc'a Umf]U dcXfz'gf hfUW\UXc bc 'UcfUOE]c/ ei UbXc `cb] Ugzbc Ua 'Xc X]Uci bc'a ca Ybhc XUW'YHUVcff]Zf'c'a Umf]U' Wa 'Ug]hYz`Wc za c`UbXc]bW]gj Yc'dUdYzYa Vfi `Uf'Wa d'zg]Wz j YXUbXc'c'a Y`cf'dcgg] Y'dfUy]hf'Uy UdcfU~c Xc'z`Wc`/c'a Umf]U' U' Uxc'dcXfz'gf [i UfUXc'gYa g'Wf'dcfj zf]cgX]Ug'9ggYdfcWggc Xy Yfz' gf]bX]Wxc'bcgfOE `cgXc'a Umf]U'a cbhXc"

5gd'Ubh]g'ei YfYei YfYa 'a UcfYg'hfUW\cg'bU\YfVcf]nU~c Ya [YfU' g-c Ugg WYbh]g'Ug'Vi `Vcg]gYUg'Lei zH]Wg'

Suculentas:



:]]i fU& `i`9l Ya d'c XYd'Ub]Ug WYbh]U' A UbXUWi` (Cactaceae).

Erf »f kq

Caule fotossintetizante, caracterizado por "fotossintetizar" a "hacer" go "enroscar" o "cru" a "tkf q0'Rqu/sui crescimento indeterminado e pode conter mucirici gpus"wg"tgvo" "a i w0Ectceygf]nk co das Cactaceae e Euphorbiaceae. Erf »f kq"cej cv/ fqu"u"q"ej co cfqu" f g" hknqerf f kqu0' *I qp±cxgu('Nqp/renzi 2007).

Cactaceae:

9gd'Uza]Uf'WbgXfUxi a UXga Ug]bhYg]ubhgXbhYUg5b]]cgYf! a Ugzdcf'UdfYg]h]f i a UWFUYg'WU]nU~c Ula V]bhYg'gWg'fCci nU/ @cfYbn] &SS, E'G-c Yfj Ugl YfUa YbhYg WYbh]Ug'Wa Wl' Yg]a YbhXc Ya WUXE]cgYZc`Uga cX]UW]UgYa Ygd]b`cg"

Para herborizar cactus colunares como o mandacaru e o xique-xique, fYWa YbXUgy'fU]nf' gW' Yg' `cb]]h] X]bUg' YhfUbg YfgUg'bc WUXE]c WbZcfa YUÚ]i fU& "

B UÚ]i fUXc Yl Ya d'fYa Wa dc f5EdcX]g]j]g U]nf'c `cWXY]b]Vg-c Xc WUXE]c"5dCg'c df]a Yfc WfhYz-g Z]HggY," Yg'cb]]h] X]bUgd'UfY]hf' c'df. bei]a Uf6LYgW' Yg]hfUbg YfgUg]f Lha UbXc'c W]UXc XYdfYgf] Uf UgWg]YUg]bh]UW]C b•a Yfc XYWg]YUg'f Wbg]XfUXc Wfz]f HU cb' a]W" v bYWg]f]c ei Yc Yl Ya d'fUa cg]fUXc dcgg UÚcf f7!9LY#ci Zi hc f6!8E"



:] [i f U & (î 9 l Y a d ' c X U W Y H U X Y 7 U M U W U Y ' 5 " < z V] r c " 6 " G Y , - c ` c b [] h X] b U ' X c ' W X C E] c ' 7 " : ` c f " 8 " 5 a c g f U W a ' g y , - c ` c b [] h X] b U ' X c ' W X C E] c ' Y X U U c f ' Y g y , - c ' h f U b g ' Y f g U ' X c ' Z i h c " 9 " G Y , - c ` c b [] h X] b U ' X U U c f " : " G Y , - c ' h f U b g ' Y f g U ' X c ' W X C E] c " : c b h Y " = " 7 " @ Y a c g ' f ' z & S S + "

D f U U [i a U g ' g W Y b h g ' X Y [f U b X Y d c f h Y ' f f Y W a Y b X U X c ' a Y f [i ` \ z l ' U g ' Y a ' z] i U Z f j Y b X c ' d c f ' U [i b g ' a] b i h c g ' Y f Y h f U ' c ' d U f . b e i] a U X Y d c] g ' d e f e r v i d a s .

E i U b X c ' U d ' U b H U U g W f ' d c g g] ' Y g l] b \ c g ' c i ' U W Y c g z ' h c f b U g Y b Y ' W g z f] c X M H f] g Y c g d f] a Y f c g d c f ' a Y c ' X Y i a U Z W c i ' i a U Y g t z h ' U X Y a U X Y f U ' c g g] i b X c g z] g c ' f z c g U W Y c g z X y Y a ' g f ' Y h f U X c g U e i Y Y g e i Y U W a ' W b h U c ' d U d Y z W b g f j U b X c ! g Y U d Y b U g ' c g ' U h f U g z ' c i ' g Y U z c g e i Y b - c ' d f Y i X] W a ' U d f Y b g U Y a "

Bromeliaceae

8 Y] X c { ' X g d c g , - c ' X Y g U g ' z c ` U g z U g V f c a f] U g U W a i ' U a ' z [i U b c ' g Y '] b h f] c f z Z h c f ' e i Y U f U j z f] c g c f [U b] g a c g ' W a c ' U b Z] c g z U h f C c X Y g z ' f d h] g z X b h Y a i] h c g c i h c g ' D c f '] g c z X y Y ! g Y h f ' a i] h U W h Y U c ' W Y h f ' V f c a f] U g d U f U e i Y U W X b h g g Y a ' Y] h U X c g ' D U f Y h f U c '] b X j ' X i c ' X c ' g c ' z f b Y W g z f] U U U i X U X Y i a ' Z W a c " 7 c f X U g d U f U d i l U f c '] b X j ' X i c ' g c ' V g U b h Y • h g z d f] b V d U a Y b h Y e i U b X c ' g c ' Y g l] b \ c g ' X Y [f U b X Y d c f h Y " 5 c ' f Y h f U ' U a c g f U z X f ' U [i a U g ' V U h X U g ' W a ' c ' Z W a c ' d U f U e i Y c g ' U b] a U g ' s a i a m , e m s e g u i d a r e t i r a - s e t o d a s a s f o l h a s , s e l e c i o n a n d o - s e a m a i o r e a a Y b c f d U f U d f Y b g U Y a z i b h a Y b h W a U] b U c f Y g W b W U I a '] a d c f U b h Y W f z h f ' H U c b ' a] W ' X Y g U Z a] U g - c ' U g ' W f Y g X U g ' V z W U g Y X U g ' V U g Y X U g ' f o l h a s (b a i n h a s) .

Dicas de Coleta de Bromeliaceae (Coffani-Nunes, 2009).

! 9 g l] W a Y g W a f c g M U U d C g y f ' Y h f U X c ' X c ' g ' V g f U c ' X y Y U j] f z ! U d U f Y h f U f ' h c X U U z [i U

! 'WUWU\Uf'YVUhf'buFcgyHudfUXYffi VUf'Ua Uhff]Ucf[|b]WUWa i 'UXU
Ydcggj Yg'UbjA Ugei YYgh'Ua 'bc'gyi ']bhf]cf/

! Ygl]Má Yg'XY'dYei Ybc'dcfh'flu'f'WFW'XY' &S!' S'W' Eci 'Wa 'dci Wg'
folhas (menos de 10) na roseta: pode prensar tudo.

! Ygl]Má Yg'XY[fUbXYdcfh'fUWá UXY(S'W' Eci 'a i]H'g'Zc '\Ug'fa U'g'XY'
%&L'U'8 Yga cbHf'Ufcg'YU'W'LYgW'\Yf'&ci " Zc '\Ug'XUf]]-c]bh'fa YX]zf]U
da roseta (folhas bem desenvolvidas) e com bom estado, sem muitos ma-
Wi W'X'g'f'c'6G' B~c' W'fh'Y'UZc '\Uz'YUXy Y'g'lf']bh'f'Uz'dcf]U'bc'z'Wa '
UVUj'b'UY']a]bUZc']UfL'W'c' Y'g'W'c' XU]b'U'cf'Y'g'W'b'WU'U'á Vfa 'Xy' Y'U'W'f'
]bh'f'c' d'f'U'df'Y'g'z!' c/

!]b'U'cf'Y'g'W'b'WU'a i]rc' [fUbXY'Wa 'Y'g'W'c' f'c'Vi' g'c' f'a U'c'f'ei Y' 'W' 'XY'
'Uf]i f'U'U'Eb'Y'g'Y'W'g'g'dc'XY'X]j]Xf'U]b'U'cf'Y'g'W'b'WU'Y'c' Y'g'W'c' U'e' 'cb[c'
do seu eixo longitudinal;

=A DC FH5B H9. B UX•j]XUXY'Wa c' df'Y'g'f'c' a U'W'f]Uz'Xy Y'g'lf'
df'Y'g'bh'bc' a]b]a c'c' Y'g'W'c' YU]b'U'cf'Y'g'W'b'WU' #]b'Zi h'g'W'b'WU]bh'f'cg'Y'
&ci " Zc '\Ug'Ya 'Vca Y'g'U'X'z'U'á Vfa]bh'f'cg"



:]]i fU& 'Ì'9l Ya d'cg'XY'W'YU'XY'6fca Y]WU'Y': cbh'Y'5!6''9''G]j U&S''7!8''B U]Wá Y'bc!
>b]cfz&S''

1

Arecaceae/palmeae as palmeiras:

JLã cgU cfUj c hfbcggUUh, ~c dUfUg dUa YfUg3C`ei Y[YfUa YbhY bcgWlã UUUhb, ~c`Ya` d`UbHgXgUzã ð]B-a U]bYi a `Wei YfU`G-c` plantas em geral com caule diferenciado do tipo estipe que possuem cresci- a Ybrc [YfUa YbhYdf]a z]c YgYa` flã]UW` Yg`5gZc` \UgYa` [YfUÚMa` fY. i b]Xgbc zd]WXUd`UbU`i bhã YbhYwa` Ugl]bcfYgMbWgY]bZi hYgMbWg` C`a Ug]a dcfHbhYfgUWf`ei Yg-c`d`UbHgl` YfUa YbhYwa` j z]cga` YfcgXY` Wa`df]a Ybrc` Yei YUgZc` \Ugg-c`lã d`Ug`5`lã cgfUei YdfYMa` cgW`YHf` dUfUXYdcglhf`bc`< Yfvz]c`ci` dUfUZ`hf`dYgei`]g`Xy` Ygf`dUfcb]rUUY` caber em nossa folha de jornal dobrado (cerca de 84 cm comprimento x 50 cm largura)... E agora? Como vamos fazer isso? Qual parte deveremos coletar?

JcWg`z`bcHflã`ei YU[i`a` UgdUa` YfUg`UdfYgYbhã` Ygl]b`cg3E`i`Y` ci`hfUg`dcgg`Yã`flã`]UW` YgYa` gY`gW` Ygfestipes)? E que existem al- [i`a` Ugy`gl`fVWg`Ufvi`g]j`Ug37ca`c`j`lã`cgZ`hY`UbcggUã`cgfU3`

9gUzã`ð]Ufi`h`]gga`UdUfUc`ca`Ya`":`cfbYwa`Uf]U`XYWbgfi` ,~c` fj`]`UgW`i`bUgYZ` \Ugi`g`UgWa`c`h` \Ux`YXj`]gUgU`UfU`fcgYfUdUfU` WbZW`c`XY`i`hbg`]`cg`fYXg`z`dYbYfUg`Wg`cg`Yg`YfUg`Wl`dfi`g`za`CfYg`z` WfXg`j`Ug`ci`fUg`UfU`U`b`UdUfU`H`W`f`ci`d`Ug`W`f`h`b`U`g`Y`H`d`Y`g`d`U`b`H`g`X`Y` XW`fU`~c`YdUg`U`]g`a`c`M`U`g`f`W`b`U`V`z`C`f`K`b`X`z`W`W`z`Zi`h`cg`h`a`U`f`U`g` U`U`z`W`W`z`V`i`h`z`z`d`f`h`b`U`g`U`•`W`f`f`b`U`]`U`g`U`W`U`Z`f`U`z`d`U`a`]`cg`f`Di`h`f`d`Y` ssp.), vinhos de seiva e dos frutos, fermentados, farinhas e outros produtos alimentares, como o sagu (Metroxylum rumphii). Servem de forragem para cgU]a` UgXca` fg]Wg`cgYXlã` YU]a` Ybhã` i`a` U`]`f`U`b`X`j` U`]`X`L`X`Y`Z`c`f`!` a`Ug`X`Y`j`]`X`U`g`j` Y`g`f`Y`C`gi`g`g`b`~c`g`~c`U`d`Y`b`U`g`U`f`h`g`b`U`g`5` W`f`U`X`Y`W`b`U`V`z` dcf`Y`l`Ya`d`cz`hã` U`d`]`W`" Y`g`U`f`cb`z`i`h`W`g`a`i`]`c` Y`g`d`Y`W`U`g`Y`f`d`f`Y`W`g`U`d`U`f`U` restauradores de obras de arte.

9`Wa`c`j`lã`cg`W`Y`H`f`Y`Ya`d`U`f`Y`g`d`Y`h`b`W`b`h`g`U`Y`g`U`zã` ð]B`J`c`W`g`z` X`Y`Ya` h`f`]a` U`]`b`U`X`c`ei`Y`b`~c`d`f`W`g`lã`cg`W`Y`H`f`c` Y`g`h`d`Y`F`Y`g`hã` U`g`Z` \`U`g`Y`]`b`!` Ú`c`f`Y`g`M`b`W`g`#`b`Zi`h`g`M`b`W`g`ei`Y`g`~c`[`Y`f`U`a`Y`bh`Y`]`f`U`b`X`g`Y`X`Y`Z`W`d`f`Y`b`U`Ya`" 9a`f`Y`U`~c`{`g`z` \`U`g`W`f`U`g`Y`W`U`i`a`U`Ya` h`f`g`d`U`f`h`g`d`Y`g`d`Y`W`b`X`c`U`M`g`Y`Wa`` U`Y`H`U`6`z`c`a`Y`c``Wa` U`Y`H`U`A` Y`c`z`d`]`W`W`a` U`Y`H`U`5`"G`Y`U`]`b`Ú`c`f`Y`g`M`b`W`U`#` ci`]`b`Zi`h`g`M`b`W`U`Z`c`f`Yã` [`f`U`b`X`g`d`c`X`Y`g`Y`X`c`V`z`!`U`g`Ya`X`i`U`g`ci`h`f`g`d`U`f`h`g`d`U`f`U` W`b`g`h`i`]`f`U`lã`cg`f`U`5`V`z`W`U`ei`Y`d`f`ch`[`Y`g`h`g`Y`g`h`i`h`f`U`g`hã`V`fa`f`V`U`g`U`b`Y`]a`d`cf`H`b`h`Y`X`Y`j`Y`g`f`a`U`b`h`X`U`b`U`lã`cg`f`U`8`Ya`U`g`]`b`Z`c`fa`U`" Y`g`g`V`Y`U`h`f`U`z` d`f`Y`g`b`U`#`U`g`b`W`U`X`Y`g`d`]`b`cg`X`Y`Ya`g`f`U`b`ch`U`g`b`c`W`X`f`b`c`X`Y`W`ã`d`c`"

Estipe

Termo especial- mente usado para caules de palmeira ó"Ecwrg`gtgq."o`cku` qw"o`gpqu"ekf`pf`tk` eq."p`q`"tco`k`z`ecf`q." onde as folhas con- centram-se apenas pq`r`leg`*]`qp`~c`x`gu` & Lonrenzi 2007).



:]i`f`U`k`î`9]`Ya`d`cg`X`Y`5`f`Y`W`W`U`Y`5`"7`cei`Y`]`c`"6`"8`Y`b`X`h`Y`]`c`"7!`8`"D`U`a`]`h`]`c`":`c`b`h`Y`~b`h`f`b`Y`H` G`h`g`Ya` F`Y`z`f`b`W`g`6]`V`c`[`f`z`U`W`g`

6 cĥ b]WU G]ghYa zĥWU Y'9Wĕb' a]WU

Bulbosas:
 B Uġd'UĥġVi Vcgġf bWgġf]cž{g] YngġWĕbU'cgVi VcgYa &
 ou 3 partes.



:]i fU&! '9l Ya d'UyġVi VcgġXUZā #]U5a Ufm]XUWU': cbĥY' -bhfbYi' GhġYa FYZf.bWġġ
 6]V]c[fzUWġ

5ei zĥWġ
 5g'Uei zĥWġa i]ĥ Zfz] Yġġc XġhYbXUġġVYi a Uzĕ\UXY'dUġY'
 UġXUei UġXc Xġbfc Xc fWġ]YbhYWa z[i UġyWġa Uĕ UfzġVYc dfCġf]c'
 papel onde foram estendidas.



:]i fU& Ĩ '9l Ya d'cg'XY'd'UġġUei zĥWġ': cbĥY' 5''5'D'DfUġZ&&S('6!8''
 BUġġa Ybġc!>b]cfz&&S "

Flores:

H f U b X c ! g Y X Y U c f Y g z f a U g U M F H X c X Y] z ! U g Y a z W c ` d c f & \ c f U g
c i i a ` d c i W ' a U g ' 5 b h g X Y d f Y b g z ! U g W b j f a] g c U f H b h c ' e i U b h c ` d c g
g j Y U g d f H U g i a U g X U g c i h f U g d f U Y j] h f e i Y a U b W Y a "



:] i f U & ` Ì ' 9 l Y a d c X Y i a U U c f ` c b X Y Y g a c ` Y] X b W X U g U g d f h g
f Y d f c X i h j U g : c b h Y B U g Y a Y b h c ! > b j c f z & S S . "

< 9 F 6 ã F = C

< c ^ Z c ` c V Y h j c ` X U c f [U b] n U ~ c ` X Y i a ` \ Y f v z f] c ` b - c ` f a U g c ` X Y
g l a d Y a Y b h Y W Y M c b u f ` d U b h g d f U g Y f a `] X b h] U M X U g Y W M U c [U X U g
G M ` c V Y h j c ` f a i] h c ` a U g U a d ` c z d c] g j] g U h a V f a ` Z f b Y M ` X U X c g d f U
Z h i f c g Y g i X c g Y W C E] W g Y U c [Y c [f z U W g " 7 c a `] g g z c ` \ Y f v c f] n U X c f
U X e i] f Y c i h f U g c v f]] U " Y g U f a ` X Y W Y h f ` Y g d f M a Y g ` G U h f Y Z u d f] b M d U
f U X Y g f i a ` c V g f j U c f W b g Y M b V c g c ` Y Y U c z X Y W U g Y W f g ` Y g z U f a `
X U W b h f] M] , ~ c ` a U h f] U Y a ` d U b h U g g Y M z f Y g ` h a Y g i X c g Y c V g f j U " Y g
U h b h] W g Y W b h U M g c V f Y U j] X U j Y] Y U z g U g W b X , " Y g U g W ! V] c C E] M g
Y U g f Y U " Y g Y b h Y c ` a Y c Y U U c f U b U f Y]] - c d f W f f] X U Y a ` W X U i a U X U g
Y W f g ` Y g ` D U f U g g l a g f z f d f Y M c ` Y a d f] a Y f c ` i [U f c V g f j U f Y Z a ` g] i] X U Z
U b c h f Y g U g c V g f j U " Y g X Y d f Y Z f . b W U Y a i a W X f b c g C U] g g X Y g] b U X c `
e, nunca deixar para mais tarde, ou para a volta, essas notas.

C i h f U g] b Z c f a U " Y g W a c ` b c a Y d c d i ` U f Y i h]] X U X g X U d U b H U d f U U
W a i b] X U X c ` W z Z Y e i . b W U b c U a V] b h z g Y j] j Y a] g c U X U g c i Y a W a i !
b] X U X g z W b g h i Y a X U X c g f Y Y U b h g ` 9 b U a z h c X U Y e i U e i Y f b c h U g V f Y U g
d f h] W U f] X U X g X U d U b H U f g a d f Y j U] c g U d f U Y g i X c g d c g h f] c f Y g X Y g X Y
e i Y b - c g Y U d c g g j Y c V g f j z ! ` c g b U d U b H U g W W

DF 9D5FC '8 9 'D@5B H5G'D5F 5 'C < 9F 6ãF=C

C 'ei Y'fi a \YVzf]c3
 I a \YVzf]c' fi a UWY, ~c Vbh]UWXY'd Ubh]gdfYgfj U]gZdfcj Yb!
 YbhgXYXj Yfg]gfY[]" Yg[] Yc[] fzUWg"



:]]i fu' \$I '9I Ya d'cgXUYgfi h fuZg]WXYU[i bg< YVzf]cg'5 "Df]g! D'6" I b]j Yfg]XUYXG-c'
 DU 'c! G'7" 9a V]UdU6f]g]U' 79B" 8"< YVzf]c Xc B Yk Mf_ '6chb]W'; UFXbI BM

7c Y," Yg Vbh]UWg-g-c']a dcf]Ubh]g'dcf'.

- Serem o registro permanente de biodiversidade;
 ! 'GYa 'UMgY'dfUdYgei]gYa 'a i]H]gX]gM']b]g Vbh]UWg/
 ! 'DfYgfj UfYa 'Ug Ygd]VWg XYZ'fa U UdYfa]Hf' Uj Yf]UW ~c' XUj U]XUY'
 H]cb' a]W'

5' fa 'XYwbfYa U]g]U]Ubi fuZ'Wa 'VgY'Ya 'gY' gUM]j cgdcXI!
 gY]W]U' a cXYcgXYdfj]g-c' ei YdcX'Ya 'gf' i g]XcgdfU]XWg' Ygdc']H]Wg'
 ou no planejamento de pesquisas futuras.

5H]j fg]X]gWY," YgdcXI'gYhf UWg-g-c' U]bZ'fa U" Ygg'VfYc U a Yb]c'
 Ya 'U] bX]b]U]YU]X]gf]M], ~c XYX]Mfa]b]U]Ygd]VWg'ci 'g'VfYc XW]b]c'
 XYci h]U'Z'Ya 'Wa c Yg]U]YYM' dUX" Yg'V]c[] Yc[] fzUWg' \]g]U]Wg'dfU]Ug'
 Ygd]VWg' G-c' h]a Vfa ']a dcf]Ubh]g']bgfi a Yb]c'gXY'Xi W ~c 'L]a V]Yb]Uz'

1

lbZcfa UbXc`XfYUci`lbXfYHá YbhY`c`gM`d`V]W`g`VfYc`dUHY`XUZi bUž
ÚcfUYa]McVchUbcg`YWggghá Ug`YUbWgg]XUXYg`UdfYgfj U`~czYg
há i`UbXc`c`]bhYggYdYc`a i bXc`bUhfU`"G-c`]]i Ua YbhY]a dYg]W]Xj Yg
dUfUc`XY]bYá Ybhc`XYa YHfYgYfUhf]]Ug`XYWbgfj U`~c`Ya UbYc`g`gMb!
tado da biodiversidade.

7ca`c`fUX]b]a]WXYi`a`YfVzf]c3
!`=Xbh]UW`~c`dYfa UbYbhYXY`d`UbHg`
!`DfcWgg]á Ybhc`XUW`Y,`~c`Vch]b]W`
!`A`Ubi`hb,`~c`XUW`Y,`~c`
!`'9bf]ei`Y]á Ybhc`ci`VYg]á Ybhc`XUW`Y,`~c`dcf`a`Y]c`XY`dfc`[`f]á Ug`XY`
W`YU`Y]bhY]á V]c`W`a`ci`hcg`YfVzf]cg
!`5`hi`U]nU`~c`XU]Xbh]UW`~c`X]g`Y`g]W]g`

8`Yi`a`a`cXc`[`YUž]c`XUUX]b]a]W]ei`Y]bj`c`j`Yi`a`YfVzf]c`W]FUW`
h]f]n]c`W`a`c`i`a`U`h`bh]W`"U`cfU]c]c`dfz]W`Y]X]z]W`dUfU]U]ei`g]g,`~c`
Xc`g]U]fz`Y]bj`c`j`YbXc`Ú`l`cg`W]bh]bi`cg`Y`dYfa`UbYbh]g`XY`Wb`Y]á`Ybhcž`
Uc`dYfa`]]f`c`U`Wgg`Y`Uc`Vg]fj`U`~c`XU]á`cg]fU`Vch]b]W`8`Yg]U`Z`cfa`Už`
kcfbUg]Y]bg]fi`a`Ybhc`Vz]g]W`XY`Ybg]bcž]bh]á`Uá`YbhY]gg`V]U]Xc`{`Z`cfa`U`~c`
XY`bc]cg`dYgei`g]U]c`fYgž`Yg]d]W]U]n]U]c`g`b]Ug`X]Z]f]Ybh]g`z]f]Ug`XU`Vch]b]Wž`
c`Z]f]W]bXc`fY]c]fbc`]]i`Ua`YbhY`{`g`W]X]U]Y`W`a`c`W]b]fc`XY`X]j`i`[`U`~c`Y`
Y]i`W`~c`Uá`V]YbhY]Y]Xá`cb]g]f]U]bXc`g`U]Y]U]W]U]Yá`U`"Yg`W]bg]fj`U]b]b]g]Ug`

5`g]X]a`Ybg`Yg`XYi`a`YfVzf]c`Yc`h]dc`XY`h]U]U`~c`X]g]Y]bj`c`j`]Xc`]f`~c`
X]h]fa`]b]U`c]g]a`f]tcXcg`XY`U]f]U]b`c`Y`W]U]Xc]f]U]b]Y`Wgg]f]cg]dUfU]U]g`Ua`U`
bi`hb,`~c`"I`a`YfVzf]c`dc`XY`h]f`i`a`YbZ`ei`Y`[`Y]Už`W`a`W`Y,"Yg`fYd]Y!
g]b]U]j`Ug`XY`X]j`Yg]g]dU]h]g`Xc`a`i`bXc";`Y]Ua`YbhY`g`~c`cg]a`Ug`U]b]h]cg`
Y]U]f]U]á`W]bh]b]Ug`XY`a`]`U]f]Yg]ci`a`]`"Yg`XY`Yg]d]M]á`Ygž`V]á`W`a`c`i`a`U`
Y]i`h]bg]U]W`Y,`~c`XY`h]dc]g]bca`Yb]W]h]f]Ug`C`i`hcg`YfVzf]cg]f]Y]U]h]á`Ug]d]W`
hcg]há`z]h]W]g]ci`]g]U]c]W]g]z]Y]W]g`z]Ug`W`Y,"Yg]dc`X]á`g]f`X]f]W]c]b]U]g`
U]i`a`U]Z`cfa`U`~c`j`Y]YU`Yg]d]W]U]Z`U]i`a`U`c`W]X]U]Z`U]i`a`W`Y]c]f]Z`U]i`a`
grupo etc.

<`zi`a`U]j`U]f]Y]X]U]Y`XY`YfVzf]cg]bc`d`U]b]YU`8`YbhY`cg]a`U]cf]Yg`Yg]h`c`
c`Xc`A`i`g]M`XY`<`g]U]c]U]B`U]i`f]U`Yá`D]U]g]f]d]L]W`a``,``,`++`"SS`Y]Yá`d]U]Yg`
e`o`do`Royal`Botanic`Gardens`Kew`(`K`)`com`6.000.000`de`exemplares.`
B`c`6]f]U]g]ž`cg]a`U]cf]Yg`g`~c`cg`Xc`A`i`g]M`B`U]c]b]U`Xc`F]c`XY`U]b]Y]fc`f]F]L`
W`a`)`S`"SSS`Yc`Xc`U]f]X]a`Vch]b]W`Xc`F]c`XY`U]b]Y]fc`f]F]6]L]W`a`(`&S`"SSS`
amostras`de`plantas.`

C`6]f]U]g]`h]á`%(`YfVzf]cg`U]j`cg`Y)`g]á`]bZ`cfa`U`"Yg`U]i`U]n]U]g`
5`d]Y]b]Ug`+`Yg]h`c`f]Y]g]f]U]Xc]g`]bh]f]b]U]c]b]U]a`YbhY`bc`~b]X]i`<`Y]f]U]f]c]fi`a`
f]k`c`a`[`f]Y]b`Y]h]U`"SS&L`5`d]Y]b]Ug`%`XY`Yg]há`U]M]j`cg]W`a`á`Ug`XY`"SS`"SSS`
Yg]d]M]á`Ygž`Y]Ua`U]cf]U]h]á`Uá`d`]]i`XY`XY`f]d]f]Yg]b]U`~c`Ygg]Yb]U]a`YbhY`f]Y!
[`]cb]U`"9`g]i`Xcg]f]Y]U]n]U]c]g]U]c]b]U]á`dUfU]U]b]Y]g]h]b]W]U]X]Y]g]fi`h`f]U]U]X]ei`U]U`
dUfU]U]W]bg]fj`U`~c`Xcg`Yg]d]M]á`Yg]b]Ua`U]cf]U]Xc]g`YfVzf]cg]f]U]g]Y]f]c]gž`Y`
d]Ygg`U`h]f]W]W`]bg]U]Y]bhY`dUfU]a`U]bh]f`c`f]h]a`c`XY`]b]W`g`~c`XY`a`U]h]f]U`

UWa dU\UbXc`c`|b|fygg`dcf`W`Yh`g`Y#ci`dYfa`i`hUYXcU`-c`fY|`"6Uf|
VcgU/`DY|`c|c`&SS`E`C`g`YfVzf|cgVfUg`Y|fcg`Yg`c`|`|`Ux`cgUa`i`gY`gci`
universidades e faculdades, e funcionam frequentemente como centros
U]j`cg`XY`hY|bL`a`Yb|c`Y`Zcfa`U`-c`XY`fY`W`f`g`g`i`a`UbcgYa`'6ch|b]WZ`Yg|
dY]WUa`Yb|Y`a`G]ghYa`zhW`'5`g]g]a`z`gYa`dY`zi`a`j`c`i`a`Y`W`b`g`X`f`z`Y`X`Y`
a`U`M`|`U`X`U`b`X`c`Y`b`f`U`X`U`b`c`U`M`j`c`"D`c`f`a`z`U`g`a`d`Y`g`U`j`|`X`U`X`Y`X`Y`M`|`g`f`c`Y`
W`U`c`|`U`-c`X`c`g`Y`g`|`M`a`Y`g`|`b`|`f`y`g`g`U`b`X`c`W`g`i`a`U`Y`g`|`f`a`i`|`c`X`Z`U`g`U`Z`d`c`f`
Z`U`H`U`X`Y`d`y`g`g`U`h`Y`W`|`W`z`|`a`d`c`g`|`M`|`|`U`b`X`c`c`d`f`c`b`c`U`W`g`g`U`Y`Y`g`

B`c`W`g`c`X`Y`i`a`d`U`g`X`Y`h`b`c`f`X`Y`i`a`U`X`L`g`U`c`f`U`g`a`U`g`f`|`W`g`X`c`|`c`V`c`z`
W`a`i`a`U`U`H`U`X`j`Y`g`|`X`U`X`Y`Y`g`d`Y`W`U`W`f`i`g`|`a`U`g`Y`i`a`j`i`|`c`X`U`c`f`X`Y`a`X`Y`
*S`S`S`Y`g`|`M`g`z`U`d`Y`b`U`g`X`Y`U`b`|`|`c`g`d`Y`f`a`U`g`z`d`f`U`c`6`f`U`g`|`Z`U`|`a`d`c`f`|`b`|`U`X`c`
|`b`W`Y`a`Y`b`c`X`L`g`W`Y`,"Y`g`f`|`b`e`i`Y`g`|`c`b`z`Y`"8`c`g`&`U`V`|`Y`g`X`Y`L`a`c`g`f`U`g`
e`i`Y`g`Y`g`|`a`U`Y`|`g`h`X`d`c`g`|`U`g`Y`a`W`Y`,"Y`g`V`|`c`U`|`W`g`X`c`a`i`b`X`c`|`c`X`c`z`
c`g`U`M`j`c`g`V`f`U`g`Y`f`c`g`X`Y`h`a`U`d`Y`b`U`g`W`f`W`X`Y`"S`i`a`|`Y`g`X`Y`L`a`c`g`f`U`g`W`f`!
f`Y`g`c`b`X`b`X`c`U`%`X`c`|`c`h`U`"9`a`f`Y`U`-c`{`g`W`Y`,"Y`g`V`c`h`|`b`|`W`g`z`c`|`c`h`U`X`Y`
Y`g`|`M`a`Y`g`|`i`U`X`U`c`g`Y`a`|`c`X`c`g`c`g`Y`f`V`z`f`|`c`g`V`f`U`g`Y`f`c`g`d`Y`Z`U`h`d`c`i`W`a`U`g`
X`Y`)"a`|`Y`g`-`g`g`f`a`i`|`c`d`c`i`W`f`Y`d`f`Y`g`b`h`U`j`c`g`Y`Z`c`f`Y`a`W`a`d`f`U`X`c`g`c`g`
a`c`b`|`U`h`g`U`b`h`f`|`c`f`Y`g`W`a`U`a`Y`|`U`|`c`X`j`Y`g`|`X`U`X`Y`X`c`d`U`g`z`c`f`b`U`b`X`c`U`M`j`U`
U`b`Y`W`g`|`X`U`X`Y`X`Y`f`Y`U`|`U`-c`X`Y`a`U`g`W`Y`h`g`|`b`h`b`g`j`U`g`Y`Y`|`h`b`g`j`U`g`D`c`i`W`
g`Y`g`U`Y`g`V`F`Y`U`W`a`d`c`g`,-c`U`c`f`|`h`|`W`X`Y`j`U`g`Y`|`h`b`g`Y`g`X`c`b`c`g`g`h`f`!
f`|`U`|`c`z`Y`h`L`a`V`f`a`c`W`b`W`a`Y`b`c`g`V`Y`c`g`j`z`f`|`c`g`U`g`M`c`g`X`U`g`g`h`a`zhW`
Y`U`c`|`Y`b`|`U`X`U`a`U`c`f`|`U`X`c`g`|`f`i`d`c`g`X`Y`d`U`b`h`g`b`Y`c`h`f`c`d`|`M`g`Y`g`z`U`b`X`U`a`i`|`c`
U`e`i`f`a`X`c`|`X`U`z`g`V`F`Y`i`X`c`a`Y`X`|`U`b`Y`U`g`W`Y`g`W`b`h`g`h`U`U`g`X`Y`X`Y`g`f`i`|`-c`X`c`g`
habitats naturais.

5`g`|`b`X`|`W`"Y`g`Y`|`b`Z`c`f`a`U`"Y`g`g`V`F`Y`c`g`Y`f`V`z`f`|`c`g`a`i`b`X`|`U`g`Y`g`c`d`f`Y`
g`Y`b`h`g`b`c`g`|`i`|`b`h`Y`b`X`Y`f`Y`c`.\`h`d`##`g`|`k`Y`b`r`v`|`"c`f`|`#`g`|`b`W`&`#`-`b`X`I`<`Y`f`|`
bariorum.asp

C`ei`Y`f`i`a`U`Y`|`g`W`U`B`

9`|`g`W`U`g`g`c`L`a`c`g`f`U`g`X`Y`d`U`b`h`g`X`g`X`f`U`X`g`f`g`W`g`z`W`U`L`g`Y`a`i`a`
d`Y`U`c`X`Y`W`f`c`|`b`U`M`U`b`W`X`Y`h`L`a`U`b`c`d`U`X`c`b`|`n`U`X`c`Y`a`;(W`W`a`d`f`|`a`Y`b`|`
|`c`l`)\$`W`U`f`|`i`f`U`'5`W`a`d`U`b`L`a`U`Y`|`g`W`U`i`a`U`U`W`U`X`Y`|`X`b`h`U`W`-c`z`c`
b`•`a`Y`f`c`X`Y`b`h`U`X`U`b`c`<`Y`f`V`z`f`|`c`z`c`W`f`|`a`V`c`W`a`U`g`|`U`X`Y`g`g`<`Y`f`V`z`f`|`c`Y`i`a`
pequeno envelope para guardar partes da planta que possam se desprender
com o passar do tempo.



: [i fU %ã 9l gWUgXc< YVzf]cXU b] YfgXUX: YXFUXYGf[]dYf5ÇE": cbhY9"7"5"A Ulog&SS+"

9GHFI HI F5 : a6=75 9 CF; 5B =N5uÈC `85G`
7C @9uÉ 9G

C g`YVzf]cg[YfUa YbhY`g-c`UM][UXc`g`dcf`]bg]h hcg`XYdYgei]gUY#
ci `Ybg]bc" C `YgdUc`bWVgzf]c`dUfUc`UwbXV]cbUa Ybhc`XUg`WY," Yg`
constitui-se, na maioria das vezes, no principal problema enfrentado pelas
WfUXcf]Ug`Y[Yf. bWUg`C `YgdUc`ZgW`Xj Yg`dcf]f`Z`h`fUg`Y`dUbg`Yg`
`z`ei`Y`Ug`W`Y," Yg`g`c`X]b|a]Wg`Y`hb`X`a`U`W`V`U`f`a`X`U`g`U`h`j`X`U`X`g`
XY`WfUXcf]Ug`dYdUfU`~c`Y`W`bg`f`j`U`~c`XY`l`a`c`g`f`U`g`5`d`C`g`U`W`Y`H`U`Y`a`
W`a`dc`z`U`f`c`a`U`M`j`U`g`f`]b`W`X`c`bc`U`M`j`c`X`c`Y`V`z`f`]c`a`U`M`j`U`d`U`g`g`
por algumas etapas descritas a seguir:

< YVcf]nU`~c.

7cbZcfa Y`z`Zc]j]gc`U`b`h`f`]c`f`a`Y`b`h`f`c`a`c`X`c`X`Y`d`f`Y`d`U`f`U`g`d`U`b`h`g`
g`W`b`X`c`!`U`g`Y`b`h`Y`U`g`d`f`Y`b`g`U`g`9`g`h`a`f`tc`X`c`f`g`l`a`d`Y`g`Y`d`Y`b`U`g`f`Y`e`i`Y`f`i`a`
dci W`XY`d`U`W`b`V`U`U`w`b`X`V`]c`b`U`g`Y`W`X`U`l`a`c`g`f`U`b`i`a`U`Z`c`U`X`Y`c`f`b`U`
X`c`V`f`U`c`/`U`g`Z`c`U`g`g`f`~c`l`a`U`f`f`U`g`b`U`d`f`Y`b`g`U`Y`X`j`Y`f`~c`g`f`h`c`W`M`g`X`j`U`
f`]l`a`Y`b`h`d`c`f`c`i`h`f`U`g`W`a`d`Y`l`a`Y`b`h`g`W`g`U`h`f`g`f`d`c`g`g`j`Y`Y`j`U`f`U`d`f`Y`b`g`U`
para uma estufa.

Etiquetagem:

Junto a cada material herborizado inclui-se uma etiqueta de papel (10 x
%&W`L`W`a`c`c`W`Y`l`U`c`X`U`W`Y`H`Z`b`c`a`Y`X`c`W`Y`c`f`z`b`•`a`Y`f`c`X`U`W`Y`H`Z`X`U`
Y`c`V`g`f`j`U`" Y`g`H`U`g`]b`Z`c`f`a`U`" Y`g`g`c`h`l`a`V`f`a`f`Y`]g`f`U`g`Y`a`i`a`U`W`X`f`b`Y`U`
d`U`h`Z`c`b`X`Y`c`W`Y`c`f`f`Y`]g`f`U`c`X`U`g`g`U`g`W`Y`H`g`Y`a`b`i`a`Y`f`U`~c`g`Y`e`i`Y`b`W`U`"

UNIVERSIDADE FEDERAL DE SERGIPE/ CCBS / DBI		NUMERO:
HERBÁRIO ASE		
FAMILIA:		
N.C.:		
HÁBITO:		
HABITAT:		
LOCAL:		
NOME(S) VULGAR (ES):		DATA DE COLETA:
COLETOR:		
OBS.:		
DETERMINADOR		DATA

Montagem:

8 Ydc]gXY\ YfVcf]nUXZud`UbUfa cbhUXg VYdUfY Wfhc fMa]gUz Ya `]YU`Wgh fUXci `dfYgUWa `UUXYgj UZYWcWUXbhc XYi a U folha dupla, seja de cartolina ou outro tipo de papel (saia), o conjunto forma uma exsicata.

7UUC[U~c YFY]]gfc.

7UXUY gWUfYWYi a `b•a Yfc XYfY]]gfc Xc < Yfvzf]c"5 UWUXc WYfcf`ei YUWa dU\Ud`UbU f hUbgW]HdUfUi a UUWUXY\ Yfvzf]c Wa hcXcgcgXUXcgcf][]bUgUgf UÚ UX{ Yl gWUYci hUÚWU]X bhW fZY]HdUfUc UWzf]c XYWbg `h"9ggY UWzf]c fcf[]bnUXc XYZfa U ggha]Wzdcf Zã]]Uz[.byfcg YYgd]Wg"5 hi Ua YbhY]]ghã `VbWgXY XUXcgX]]HugcbXY Ug]bZfa U" Yggc VYcg Ygd]Má Yggc `Uã d`Uã YbhY Xji i [UXgUfUj fgXU]bhfbYh"

Bc`j]fc XYfY]]gfcZUbchUgZdcf cfXá bi a f]Wzc b•a Yfc XYfY]]gfc XUd`UbU`C`a Uhf]U`f Ybhc]bW`Xc bc < Yfvzf]c [YfUZXYUWfXc Wa U g U]Xbh]UW~c"

7cbgfj U~c.

5g`Yl gWUg`g-c`Wbgyfj UXg Xbhc XY Ufa zf]cg` \Yfa Yh]Wã YbhY ZWUXcgci `Ya `UhgWa Vg]bhYbUZU]bUYWbZcfUci `ci hfcgdfcXi hcg` D`UbHg` \YfVcf]nUXg`g-c`a i]hc`g`gW]Yg`UgfYa `UWUWg`dcf]bgYcgZ a Yga`c`ei UbXc [i UfXUXg`Xbhc`XUg`Uhg`Ufa zf]cg`HcXc`W]XUXc`Xj Y gY`XgdYbgXc`dUfUg UWbgyfj U~c"

=89B H= =75B 8C HãLCB G

FYZf. bV]g

Depois que o material passa por todo o processo acima descrito, chegou U\cfUf]z'z'b-c Zc]Z]hc'bc'a ca Ybrc XUW`YHLXYfYU]nlfU]Xbh]UM ~c` Xc'a Uhf]U'ci`XYWb]Ufa U'Lei YYbca YUbch]Xc`Xi fubh]UW`YHU`DUFU fYU]nlf a cg'U]Xbh]UM ~c`Xc'a Uhf]U`dfY]g]a cg'hf`V]V]c]fU]U YgdY! WU]n]XUei YU l]]YbU]Xbh]UM ~c`Ya`bj Y`XYZã ð]U]Z[. bYfc Y]Ygd]M`

DUFUfYU]nlf]Xbh]UM" YgYa`bj Y`XYZã ð]U]Y]Wã YbXU]gYc`j]fc XY Souza & Lorenzi (2008) que fornece chaves atualizadas que nos permitem Zh]f Ygg]U]Xbh]UM ~c`DUFU]Xbh]UMfa cg[. bYfcgY]Ygd]M]g]hcfbU]gYbY! Wggz]U]Uei]g, ~c XYV]V]c]fU]U YgdY]W]W]g]Wã c'f]j]g' Ygh]cb`a]W]z h]g]z]U]h]cg]X]j Yfgcg'V]Ycg[. bYfcgYa`ei Yg`c"

5`[i a U]g]Zã ð]U]g]d]cg] Ya`h]fa]bc`c]]U]M]g]ubh]Yg]W]W]Z]U]g]Wã c` Poaceae e Cyperaceae necessitando de um conhecimento mais acurado das Ygf]i h]fU]g]Y]h]fa]bc`c]]U]d]U]f]U]f]U]nlfU]Xbh]UM ~c`G-c Zã ð]U]g]Wã i a U f]X], ~c`Y]j U]U~c`a cfZc`C]E]Wã i]hc`[fubXY`

JUY`d]bU]Ya V]U]UbY]W]g]X]X]Y]Y]f]]g]f]U]i a`a Uhf]U]h]g]Ya i b`c`bc`Y]V]z]c]g]ã d]f]Yei Y]b]W]f]i a U]bz]]g]Y]b]U]h]a]W]zei ðã]W]Z]fa U]W]C]E]! W]ci`ei Uei Y`h]f]U]U]c`V]Xbh]UM`ei Y]bj c]j U]U]Xbh]UM ~c`XU]Ygd]M`

I a`Y]V]z]c]`[Y]U]a Ybh]d]cg]]Ya`g]m`UM]j c`a Uhf]U]d]U]g]]Y`XY`g]Y fYU]nlf]Wã d]FU" Ygg`V]Y]Ygd]M]ã Yg]XU]C]f]U]c]W]Y]V]V]c]fU]U]X]g]d]cb]j Y`d]FU]U]l]]U]f`b]U]Xbh]UM ~c`Xcg`Ygd]M]ã Yg`5`fa`X]gg]z`U]W]F]U]c]f]U]Xc` \Y]V]z]c]fYU]n]U]d]f]c]X]Wã Ybh]d]Y]fa i]UX]Ya Uhf]U]Wã`ci`h]cg`\Y]V]z]c]g] d]FU]d]c]X]f]U]ã d]U]f]U]g]b]z]fa U" Ygg`V]Y]X]h]fa]b]U]U]g]Ygd]M]g]Z]g]f]M], ~c` [Yc`[fz]U]M]X]g]ã Ygã U]g]Y]ã d]h]XYXYU]f]U]b]. b]W]UXc`UM]j c`"

7cbg`h]U]U`h]U]cbca]g]U]Xc`< Y]V]z]c]`Y`g]f]YZf. b]W]U]g]V]V]c]fz]U]M]g]g-c Ygg]b]W]U]g]d]FU]l]]U]f`b]U]Xbh]UM ~c`W]ff]Y]U]Xc`a Uhf]U]Ya`ei Yg`c"

Na WEB...

DUFUfYU]nlfU]W]b]U]fa U~c`XU]fU]U]X]Y]U]i b]g]bca Yg]Yd]FU]U]l]]U]f`bc`W]b`Y]Wã Ybrc`g`V]Y]U]X]g]f]M], ~c`[Yc`[fz]U]M]X]Y]U]i a U]g]Ygd]M]g]d]c]X]ã cg`i h]n]f]U]i b]g]f]Y]M]g]g]X]g]d]cb]j Yg]b]U]K 96.

Gd]b`!Dfc`Y]c`Wã XU]cg]d]f]a z]c]g]X]Y]W`Y," Yg`h]hd`##g]d]b`"W]U]cf]`V]#`=b]X]l` \Y]V]U]f]c]f]i a`f]h]hd`##k]k]k]b]m]V]`c]f]`#]V]g]M]#]`#]` \]ã`L]`W]b]h]bi`!

amente atualizado;

HFC D=7C G`f]h]hd`##a c`V]c]h]ã c`V]c]h]cf]`#]K`'H]#]G]Y]U]W]#]U]g]h`h]ã`L]`d]fc]j`..bca Yg]UM]h]c]z]U]h]cf]Y]g]z]d]i V]W]M`Yg`XY`h]z]l`cbg`

IPNI - International Plant Names Index (<http://www.ipni.org/index>. \]ã`L]`]b]h]f]U]c]g]`b]X]W]g]Xc`F6;`!`?`Yk]z`<`U]f]U]f]X]I`b]j`Y]f]g]h]m]Y]5]i`g]h]U]U]b`B]U]h]cb]U`<`Y]V]U]f]i a`z]h]f]U]h]Y]b]Xc`bca Yg]Y]U]V]V]c]fU]U]V]z]g]W]U]gg`W]U]X]Z]X]Y]h]c]X]U]g]U]g]Ygd]Y]fa U]C]E]h]g`

Angiosperm Phylogeny Website (<http://www.mobot.org/MOBOT/>

FYgMfW#5Dk Wl' Ya WbgUbhYfYzfa i U -czUdfYgYbHUga UgfYWbhg
Y]X.b]W]gXYfYU]b\La Ybhc' Ya 'Uc[Yb]UXYUb[]cgdYfa Ug'YU']hfUf HU
associada.

Diversity of Life Dot Org (<http://www.plantsystematics.org/javatree>.
\la Ll' hfU'Uc[Yb]UgYfWbhgXY[fUbXYg[fi d'cg'XY'd'UbH]gYU]a Ug'

B c' hff]]CE]c' bUWcbUzUdz[]bUHU cbca]Ubc' 6fUg' f]hd.##k k k, "
i Z[g'Vf##HU cbca]Uzj]bW'UXU{ 'GeV]XUXY6chb]W]Xc' 6fUg' zUdfYgYbHU
XUXc'g'Ui U]nUXc'g'XY'hc'Xc'g'cg' \YVzf]cg'VfUg'Yf'cg'Y'Xc'g'dYgei]gUXcfYg'
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7CB 7@I GÈC

C' 6fUg']Wf]]UU'cfUa Ugf]W]Xc' a i bXc'zc' ei YWf]La YbhYg'z'fYU
VcbUXc' { g' UY hbg-c' hff]]cf]UzUgg'W]XU{ 'Ybcfa YXj YfgXUXYXzU'Wz
W]a zH]W]Y[Yca cfz']CE]Wz' Y'UbXc' Ui a ULa d'U[La UX]h'd'cgj Y] YfUWc!
bUg'f] =I @-9HF- 'YhU' " &SS- E' :9a 'Z]W]XUXj YfgXUXYVchb]W]Y]ghbY
Ui Ua YbhY'XU'fUd]X]n'Wa 'ei YU[i bg'La V]Ybhg#V]ca Ug'Yg'c' g'YbXc'
UhfUXc'g'z'X] fUXUXc'g'a YX]UbhYUU -c' Ubh]CE]Wz'c' dUdY' Xc'g' \YVzf]cg' f
XYZ bXLa YbHU]a dcf]]bW]UdFU[fUbh]f' {g'Z' h' fUg']YU' " Yg'c' Wb\W]W
a Ybhc' g' VYUg'd'UbH]g'XY'X]h'fa]bUXUfY]]-c' "C' dUdY' Xc']HU'cbca]gU
g'fz' Z'cfbYWf'c' bca YW]bh]U'W'wffYc' X]g'd'UbH]g'dFUei Y]Ug'd'cg]La '
g'f'Yg'i X]X]g'Yg'Y'cfbU'Ya 'c'V'Yc' X]j z]]Ug'U'cfX]]bg'z'Y'Z'f'c' W]g'z]Ug'
W]a c'Ubz]g'g'UbU] a]W]z'ei]a]W]z'c' 'YW'U'f'g'z'X]bhY'ci h'Ug'Yc' Wb\W]W
a Ybhc' g' VYU'ei YU'Ygd]W]dcgg'Ug'f'La d'La Ybh'X]j i]UXc' "8 Y] Ya cg' Y] Uf'
Ya 'Wbg]X]fU' -c' ei Yi a U' b]W]d'UbH]dc'XY'h]f'j z]]cg'bca Yg'd'cdi 'UfYg'U
X]d'YbX]f'X]UfY]]-c' X]c'Wff. b]W]Z'YX]j Ya cg'h'ca Uf'g'a d'fYc' W]X]Xc' X]Y
i h]]n]f'c' bca YW]bh]U'W' dU'Ug'Y'f'Z]f']f'ci 'bca YU' U'g'Ygd]W]g' "8 Y] Ya cg'
Wb\W]W' U'g'Z]La]]Ug'Vchb]W]g'ei YUdfYgYbHU' d'YW']Uf]X]X]g'Ya 'fYU' -c'
UdfYbg]U' Ya 'Y' \YVcf]]nU' -cz'VYa 'Wa c'cg'W]F]U]W]Yg']a dcf]]UbH]g'dFUU
g' U]X]bh]U'W] -c' dFUei Ydcgg]La cg'dfYg'f] z]]cg'X] fUbhY'U'W]bZ]W] -c' Xc'
a Uhf]U' Vchb]W]U'g'f']bW]]Xc' bc' \YVzf]c' f]m' g]W]U]]ci W]f]L'dFUei Y
X]g]U'Z'f'a Ucg']HU'cbca]gU'g'Ygd]W]U]g'U'g'd'cg]La ']X]bh]U'W] -c' a Uhf]U'
adequadamente.

1

RESUMO



J la cgbYgYVdhi `c ei YI lgha h]W]WgdUfUW`YHf`Ygd]Wg`XydYb!
 XbXc`XYgi`dcfhZ`YeI YUW`YUXY`i a UYgd]WY`YVzVUdYei YbUgYz`
 diferenciada e mais simples do que a coleta de uma Bromeliaceae, que tam-
 Vfa `f`YVzVUdZ`1 gLa Ybh`dcf`Ygd]Wg`XyGUZa`f]UdYgYbhf`U[i a Ug`
 X]ZfYb, Ug`dW]UfYg`5`fa`Xggzci`hUg`Za`f]Ug`Vch]b]Wg]f`-c`UdYgYbhf`
 U[i bg`WUMfYg`hU`cb`a`]Wg`ja`dcf]Ubhg`ei`YXj`Yf`-c`gf`a`Ub]Xcg`Y`
 Ygf`Wbh]XcgbUa`cg]UdUfUei`Ydcg]La`cg]Xybh]UMf`Ygh`a`UM]U`Wf!
 fYLa`Ybh`bc`Z`h`fc`C`d`UbY`La`Ybhc`d`fU`UW`YU`fa`i`]lc`ja`dcf]Ubh`v`
 c`]b]M`X`Y`h`Xc`"DFY]La`cg`Z`h`f`j`z]Ug`c`Vg]f`U`"Yg`z`df`Yb`g`f`c`a`UM]U`Z`
 carregar equipamentos etc. Em uma simples coleta podemos trazer mate-
 f]U`dUfUj`z]Ug`Uc`fX]U`Yb`g`Ug`Wf. `U`La`cg]Ug`XY`d`Ub]Ug`dU`dcg]M]cf`
 gY]Ya`z`df`ZY`fYb]Ua`Ybh`Wa`X`d`]W]Ug`V`L`Uc`f`Yg`Zi`hcg`Y`dU`fh`g`j`Y!
 YU]j`Ug`dY`g]f`U`L`g`Ya`:"5"5`ci`z`Wc`U`+S`i`dU`fU`Y`g`i`X`cg`Ub]U`a`]Wg`
 c) material para estudos de cromossomos; d) frutos para a carpoteca; e)
 5a`cg]Ug`XY`a`UX]Ug`dU`fU`Y`g`i`X`cg`Ub]U`a`]Wg`Z`a`UM]U`dU`fU`Y`g`i`X`cg`
 ei`]a`]Wg`[`La`UM]U`dU`fU`U`bz`]g`Ya`c`Y`W`f`Y`La`i`X`Ug`Y`g]U`W`Y`g`Ya`Ybh`g`
 dU`fU`d`f`cd`U`U`-c`"J`ja`cg`h`La`V`fa`ei`Ug`a`UM]Ug`dY`W]La`cg`Y`j`U`dU`fU`
 realizar a coleta, dentre eles materiais pessoais e materiais para nos auxil-
 iar a retirar a planta do solo e cortar os ramos, material para prensar etc.
 J`ja`cgei`YXj`Ya`cg`Z`h`f`j`z]Ug`c`Vg]f`U`"Yg`Ya`Wa`dcz`df]b]W]Ua`Ybh`
 X]Ug`Yfi`h`fUg`ci`]b]Z`fa`U`"Ygei`Ydcg]La`gf`dY`X]Ug`X`i`f`bh`Ug`W]Ya`
 Wa`c`Wf`Yc`Xc`"5`d`Cg`UW`YUj`Ya`UdYb`g]U`Ya`z`g`W]Ya`#`Y`V`cf]nU`-c`
 Xc`a`UM]U`Z`ei`Y`f`Ud`f`h`Xc`dY`dU`f`c`X]Ug`d`Ub]Ug`dU`fU`]b]W]f`bc`UM]c`Xc`
 <`Y`V`z]c`zei`Y`fi`a`UW`Y`-c`V`W]b]U`W`X`Y`d`Ub]Ug`dY`g]f`U`L`g`z`df`c`j`Yb]Ybh`g`
 XY`Xj`Y`g`d`g`f`Y`]"`Yg`[`Yc`[`fz`U`Mg`"8`Yi`a`a`c`Xc`[`Y`U`z`h`c`XU`X]b]a`]W`ei`Y`
 Ybj`c`j`Yi`a`Y`V`z]c`W`UM]f]nU`c`Wa`c`i`a`U`h`bh]W`U`c`f`U`C]c`d`f`z]h]W`
 YX]X]h]W`dU`fU`U`ei`]g]`-c`Xc`g]U`M`z`Y`bj`c`j`Yb`Xc`U`i`l`cg`W`bh]i`cg`Y`d`Y`fa`U`
 b]Ybh`g`XY`Wb`W]a`Ybhc`Z`L`c`d`Y`fa`]h`f`c`U`W`g`c`Y`U`c`V`g]f`U`-c`XU`La`cg]U`
 Vch]b]W]8`Yg]U`Z`fa`U`z`c`f`b`U`g]Y]b]g]fi`a`Ybhc`V`z]g]W`X`Y`Y`b]g]bc`z]b]h]a`La`Ybh`
 U`g`W]Xc`{`Z`fa`U`-c`XY`bc`j`cg`dY`gei`]g]Xc`f`g`Z`g]d]W]U]nU`c`g]b]U`g]X]Z]f`Ybh`g`
 z]Y`U`g]XU`Vch]b]W]Z`c`Z]f`Y`W]b`Xc`f`Y`c`f`bc`]i`i`Ua`Ybh`{`g`W]X]X]Y`Wa`c`W`b]f`c`
 XY`X]j`i`[U`-c`Y`Y`X]`W`-c`La`V]Yb]U`Y`X]a`cb`g]f`U`b`Xc`g`U`Y`U`W]U`Ya`U`"Yg`
 W`b`g]f]U`M`b]g]U`"5`g`X]a`Y`b`g`Y`g`XY`i`a`Y`V`z]c`Y`c`h`dc`XY`f`U`U`c`X]U`
 g]bj`c`j`Xc`f`-c`X]Y`fa`]b]U`f`c`g`a`]f`c`X`cg`XY`f`f`U`b`c`Y`W`f`U`X`f]U`b]W`g]z]f]c`g`
 dU`fU`U`g]Ua`Ub]i`h`b`-c`"z`i`a`Uj`U`f]Y`X]X]Y`X]Y`V`z]c]g]bc`d`Ub]Y`U`8`Ybh`Y`
 c`g`a`U`c`f`Y`g`Y`h`c`c`Xc`A`i`g]Y`XY`<`]g]U`E]U`B`U`i`f`U`Ya`D`U`f]g`f`D`L`Wa`,"`++z`
 300 exemplares e o do Royal Botanic Gardens, Kew (K) com 6.000,000 de
 Y`Ya`d`U`f`Y`g`B`c`6`f`U`g`z`cg`a`U`c`f`Y`g`g`-c`cg`Xc`A`i`g]Y`B`U`M`cb`U`Xc`F]c`XY`
 >U`b]Y`f`c`f`F`L`Wa`))`S`S`S`Y`c`Xc`>U`f]X]a`Vch]b]W`Xc`F]c`XY`>U`b]Y`f`c`f`F`L`
 com 420.000 amostras de plantas. Depois que o material passa por todo o
 d`f`c`W`g`c`W]U`X`c`Ub]h]f]c`fa`Ybh`W]Y]ci`U`c`f`U`X`Y`f`Y]n]f`U`g]U`]X]Ybh]U`W`-c`

ci `XYWbÚfa Uf`Uei YYbca YUbc hXc`Xi fubhYUW`YHU`DUFUfYU]nfa cg U]XbhÚW ~c`Xc`a Uhf]U`dfWg`a cg`hf`V]V]c[fUÚYgd]WU]nXUei Y U l]]YbU]XbhÚW ~c`Ya`bj`Y`XYZá ð]L[.byfc`YYgd]W`5h Ua YbhY hÁ cg`UWgg`Uc`UMfj`c`XYj`z]cg`YVzf]cg`UfUj`fg`XU]bhfbYidUfUei Y estudiosos e especialistas possam analisar.



ATIVIDADES

": UUi a fYg a c`g`VfYUgd]b]WUgh]W]WgXYW`YHU`A U]bc`]cd`nU &`@]Ua Uhf]Udi V]WUdYUZ`UXYG`c DU`c`Ya`&`#S) #&S, YX]gMU U]a dcf]b]WUcg`YVzf]cg`YXcg`hU`cbca]gh]gd]FUUXg]W]WfHUXYbc! vas plantas. <http://www1.folha.uol.com.br/folha/ciencia/ult306u404957.shtml>
 ' "DYgei]gYbU]bhfbYici`bc`lj`fc`XYGci`nUY`cfYbn]fR\$S, LYZU`Ui a`fY`g a c`g`VfYcg`WUMfYg`XU]bc]h]Wg`X]gZá ð]Ug6fca Y]UWUZ7UMUMY Y5fYWMUfDUa Ue`f7`UfUMfYg`XU]bc]h]Wgg`c`Uei`Ygei`YbcgU l]]Ua`U]XbhÚW`#fYwb`Wf`Ug`Ygd]Wg`#] .byfc`#Zá ð]Ug`("8`..Y`Ya`d`cg`XY`hf.g`Ygd]Wg`XY`WUZá ð]Ug`dfU`WU`)"`J`Yf]Uei`Y`Uei`U`h]XUX`XY`Y`Ya`d`UfYg`Xc`<`YVzf]c`XUI`bj`Yfg`XUX`Federal de Sergipe (ASE).



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B`Udf]Ua`UU`U]fYa`cg`Y`h`X]fUg`]a`bcg]fYa`Uzi`a`[fi`dc`XYd`U`h]g`Wa`g`Ya`Y`bh]g`bi`Uz`b`c`Yb`WfU`L`g`Ya`c`j`z]cg`"

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