

&

/ & " /

!B @ 0 = 8 F 0 1/3

" 8 ; 0 = 4 A 8 O Tillandsia

gradinar, A J 1 > B 0 11 0 ? @ 8 ; 2009 - 13:42:27

! 5 < 5 9 A B 2 >: = 0 = 0 A > 2 8 Bromeliaceae
@ > 8 7 E > 4: ! 5 2 5 @ = 0 8 . 6 = 0 < 5 @ 8 : 0

J < @ > 4 J B = 0 " 8 ; 0 = 4 A 8 8 B 5 ? @ 8 = 0 4 ; 5 6 0 B ? > 2 5 G 5 > B 4 0 0 2 8 4 0.
0 @ 0 7 ; 8 : 0 > B 4 @ C 3 8 B 5 1 @ > < 5 ; 8 8, @ > 7 5 B : 8 B 5 = 0 B 8 ; 0 = 4 A 8 8 B 5
= 5 A 0 ? @ 8 A ? > A > 1 5 = 8 4 0 A J 1 8 @ 0 B 2 > 4 0. 8 A B 0 B 0 8 < A 0 B 5 A = 8.

& 2 5 B J B = 0 @ 0 A B 5 = 8 5 B > 8 7 @ 0 A B 2 0 > B A @ 5 4 0 B 0 < C. " > 9 5 A
1 ; 5 4 > @ > 7 > 2 F 2 O B. > : @ 0 O = 0 @ > 7 5 B : 0 B 0 F J D B O B 8 O @ : > A 8 = 8
F 2 5 B > 2 5. 0 4 0 A 5 @ 0 7 B 2 > @ O B B 5 > 1 0 G 5, 5 = 5 > 1 E > 4 8 < 0
? > - 3 > ; O < 0 2 ; 0 6 => A B = 0 2 J 7 4 C E 0.

? > 2 5 G 5 B > A ; C G 0 8 B 8 ; 0 = 4 A 8 8 B 5 A 0 0 B < > A D 5 @ = 8 1 @ > < 5 ; 8 8.
< 0 8 = O : > 8 2 8 4 > 2 5 = 0 7 5 < = 8, : 0 B > = 0 ? @ 8 < 5 @ Tillandsia cyanea, = >
2 A 8 G : 8 A 0 A J A A ; 0 1 > @ 0 7 2 8 B 8 : > @ 5 = 8. 8 2 0 B A 8 2 8 8 7 5 ; 5 = 8.
- ? @ 8 @ > 4 0 B 0 A 8 2 8 B 5 B 8 ; 0 = 4 A 8 8 = 0 9 - G 5 A B > A 5 ? @ 8 : @ 5 ? O B : J <
2 J 7 4 C H = 8 : > @ 5 = 8 = 0 4 J @ 2 5 B 0, A : 0 ; 8 8 ; 8 : 0 : B C A 8. > 4 0 B 0 8
E @ 0 = 8 B 5 ; = 8 B 5 2 5 1 5 A B 2 0 ? > A B J ? 2 0 B ? @ 5 7 ; 8 A B 0 B 0, : > 8 B >
8 < 0 B 1 5 ; 5 7 = 8 : 0 2 > - A 8 2 : 0 2 > B B 5 = J :.
- 5 ; 5 = 8 B 5 B 8 ; 0 = 4 A 8 8 @ 0 A B 0 B 2 ? > G 2 0 B 0. 1 @ 0 7 C 2 0 B @ > 7 5 B : 0,
A J F 2 5 B 8 O 4 2 C @ 5 4 5 = ; ; 0 A A @ > 7 > 2 F 2 O B (Tillandsia cyanea 2 8 A > G 8 = 0
4 > 2 5 cm, F J D B 8 > B A 5 ? B 5 < 2 @ 8 4 > O = C 0 @ 8. & 2 5 B G 5 B 0 B 0 A 0
; 8 ; 0 2 8).

8 A > : > A ? 5 F 8 0 ; 8 7 8 @ 0 = 8 0 4 A > @ 1 8 @ 0 1 8 2 ; 0 A 8 = : 8, 3 J A B >
@ 0 7 ? > ; > 6 5 = 8 = 0 ; 8 A B 0 B 0, ? > 3 ; J 1 0 B > B 2 J 7 4 C E 0 2 ; 0 3 0 8
E @ 0 = 8 B 5 ; = 8 2 5 1 5 A B 2 0. A C E 8 O ? 5 @ 8 > 4 2 ; 0 A 8 = : 8 B 5 A 5
= 0 ? J ; 2 0 B A 2 J 7 4 C E 8 ? @ 8 4 > 1 8 2 0 B A @ 5 1 @ 8 A B F 2 O B A ; C 6 0 B
: 0 B > ? @ 5 3 @ 0 4 0 : J < 2 J B @ 5 H = 8 B 5 B J : 0 = 8. @ 8 2 ; 0 6 5 = 2 J 7 4 C E
B 5 ? > 5 < 0 B 1 J @ 7 > 2 > 4 0 8 O 8 7 B ; 0 A : 2 0 B 2 B J : 0 = B 0 = 0
@ 0 A B 5 = 8 5 B >.

; 0 A 8 = : 8 B 5, A J I > B 0 : 0 7 0 1 8 B 0 2 0 B @ 0 A B 5 = 8 5 B > > B
? @ 5 3 @ 0 2 0 = 5 8 8 7 A J E 2 0 = 5, > B @ 0 7 O 2 0 9 : 8 A ; J = G 5 2 0 B 0
A 2 5 B ; 8 = 0.

& 2 5 B > 2 5 B 5, : 0 : B > C 2 A 8 G : 8 @ > < 5 ; 8 5 2 8 A 0 A J 1 @ 0 = 8 2 ? @ > A B 8
8 ; 8 A ; > 6 = 8 A J F 2 5 B 8 O : ; 0 A > 2 8 4 = 8, < 5 B ; > 2 8 4 = 8,

: 8 A B > 2 8 4 = 8, A O @ : 8 ? @ 8 F 2 5 B = 8 F 8.

! ; 5 4 F J D B 5 6 0 < 0 9 G 8 => B > @ 0 A B 5 = 8 5 > 1 8 : = > 2 5 => C < 8 @ 0.
 @ 8 ? @ 0 2 8 ; = 8 3 @ 8 6 8 4 > B > 2 0 2 @ 5 < 5 B > 5 C A ? O ; > 4 0 > 1 @ 0 7 C 2 0
 => 2 8 @ > 7 5 B : 8.

0 : A 5 7 0 : @ 5 ? 2 0 B 2 J 7 4 C H = 8 B 5 B 8 ; 0 = 4 A 8 8 2 4 > < 0 H = 8
 C A ; > 2 8 O:
 - > 6 5 4 0 A 0 7 0 ; 5 ? 5 = 8 7 0 = O : 0 : 2 0 4 5 : > @ 0 B 8 2 = 0 ? > 4 ? > @ 0.
 - A B J : ; 5 = A J 4, = 0 4 J => B > 4 5 1 5 ; A ; > 9 : 0 < J G 5 B 0, > B 3 > @ 5
 B 8 ; 0 = 4 A 8 O B 0. ! 8 ? 2 0 A 5 2 > 4 0, : > O B > A B 8 3 0 4 > = 0 9 - 3 > @ = 8 O
 A ; > 9 : 0 < J G 5 B 0. : > A J 4 J B 8 < 0 ? > - B O A => 3 J @ ; >, 1 5 A 5
 ? > ; C G 8 7 0 4 J @ 6 0 = 5 = 0 G 0 A B > B 8 7 ? 0 @ 5 = 8 O B 0 8 = 5 1 > : 0 B >
 < 8 = 8 B 5 @ 0 @ 8 C <.
 - > 6 5 4 0 A 5 A ; > 6 0 B 2 J 2 2 ; 0 6 5 = : > : > A > 2 3 @ C = 4.

O : > 8 2 8 4 > 2 5:

Tillandsia caput-medusae A < 5 A 5 A B 8 8 7 : @ 8 2 5 = 8 ; 8 A B 0, 8 7 ; 8 7 0 1 8 > B
 : @ C H > ? > 4 > 1 = 0 > A = > 2 0; F J D B 8 A J A A 8 = 8 F 2 5 B G 5 B 0, 8 7 ; 8 7 0 1 8
 > B G 5 @ 2 5 = 8 ? @ 8 F 2 5 B = 8 F 8
 Tillandsia ionantha A 8 7 O I = > 8 7 2 8 B 8 A @ 5 1 @ 8 A B 8 8 7 > A B @ 5 = 8 ; 8 A B 0 4 >
 1 0 A < 4 J ; 6 8 = 0; F 2 5 B G 5 B 0 B 0 A 0 1 5 7 A B 5 1 ; 5 = 8 2 8 > ; 5 B > 2 8
 : > 3 0 B > A 5 ? > O 2 O B, 2 J B @ 5 H = 8 B 5 ; 8 A B 0 A B 0 2 0 B G 5 @ 2 5 = 8 : 0 2 8
 "illandsia usneoides ? @ 8 ; 8 G 0 = 0 ; 8 H 5 9 F 2 5 B > 2 5 B 5 A 0 < = > 3 >
 : @ 0 B : > B @ 0 9 = 8, = > ; 8 A B 0 B 0 > : > ; > B O E ? @ > < 5 = O B F 2 5 B 0 A 8 8
 ? > B > 7 8 = 0 G 8 = 7 0 4 J ; 3 > 7 0 ? 0 7 2 0 B A 2 > O B 0 4 5 : > @ 0 B 8 2 = > A B.
 Tillandsia argentea
 Tillandsia fasciculata
 Tillandsia juncea
 "illandsia stricta
 "illandsia tectorum
 Tillandsia Cyanea = 0 7 5 < = 0 1 @ > < 5 ; 8 O A J A 7 5 ; 5 = 8 ; 8 A B 0, @ > 7 > 2
 ? @ 8 F 2 5 B = 8 : 8 ; 8 ; 0 2 8 F 2 5 B G 5 B 0

" 5 < ? 5 @ 0 B C @ 0 :

@ > ; 5 B, ; O B > to 2 1 o 2 9 o ! ;
 8 < 0 B 0 to 1 8 o 2 1 o !, : 0 B > 5 6 5 ; 0 B 5 ; = > = > I = 8 B 5
 B 5 < ? 5 @ 0 B C @ 8 4 0 A 5 ? > = 8 6 0 2 0 B 4 > 1 7 > !

> ; 8 2 0 = 5:

< 5 A B > ? > ; 8 2 0 = 5, @ 0 A B 5 = 8 5 B > ? 5 @ 8 > 4 8 G 5 A : 8 A 5 ? > B 0 ? O 2
 A J 4 A 2 > 4 0 (7 0 2 0 30 min):
 O B > B > 2 5 4 = J 6 = 0 2 3 4 = 8;
 8 < 0 B 0 2 5 4 = J 6 2 A 5 4 < 8 F 0 B 0.
 > A = > 2 0 B 0 = 0 @ > 7 5 B : 0 B 0 = 5 B @ O 1 2 0 4 0 7 0 A B > O 2 0 2 > 4 0 !

@ J A : 0 = 5:

5 6 5 4 = 5 2 = >, > 1 8 ; = > ! > A = > 2 0 B 0 = 0 @ > 7 5 B : 0 B 0 = 5 B @ O 1 2 0 4 0

7 0 A B > O 2 0 2 > 4 0!

8 A > : 0 2 J 7 4 C H = 0 2 ; 0 6 => A B !

A ? 5 H => A 5 > B 3 ; 5 6 4 0 B 2 7 0 B 2 > @ 5 = 8 B 5 @ 0 @ 8 C < 8 8 ; 8 4 >
A B 0 9 = 8 D > = B 0 = G 5 B 0 A ? > A B > O ==> B 5 G 0 1 0 2 > 4 0.

" > @ 5 = 5:

? 5 @ 8 > 4 0 = 0 @ 0 A B 5 6 @ 0 A B 5 = 8 5 B > A 5 ? > 4 E @ 0 = 2 0 A B > @ > 2 5 2
= 5 3 > ; 5 < 8 4 > 7 8 7 0 = 0 7 5 < = 8 B 5 1/2 > B 4 > 7 0 B 0 , 8 7 ? > ; 7 2 0 = 0
7 0 4 @ C 3 8 F 2 5 B O , 0 7 0 2 J 7 4 C H = 8 B 5 1/4.

@ 5 A 0 6 4 0 = 5 - 7 0 = 0 7 5 < = 8 B 5:

Tillandsia cyanea A 5 7 0 A 0 6 4 0 2 ? > G 2 5 = 0 A < 5 A , A J A B > O 1 0 A 5 > B B > @ D ,
A D 0 3 = C < (2 8 4 < J E) , ? 0 @ G 5 B 0 : > @ 0 8 4 J @ 2 5 = 8 2 J 3 ; 8 1 0 (1 : 1 : 1 : 1 / 2) .
@ 5 A 0 6 4 0 A 5 2 5 4 = J 6 = 0 2 3 3 > 4 8 = 8 .

! 2 5 B ; 8 = 0:

B 0 ? @ 8 ; 4 > > : B > < 2 @ 8 O @ : 0 , @ 0 7 A 5 O = 0 A 2 5 B ; 8 = 0 . " @ O 1 2 0
4 0 A 5 ? 0 7 8 > B ? @ O : 0 A ; J = G 5 2 0 A 2 5 B ; 8 = 0 ? @ 5 7 ; 5 B = 8 B 5
< 5 A 5 F 8 !
B = > 5 < 2 @ 8 4 > < 0 @ B ? @ 5 : 8 A ; J = G 5 2 8 ; J G 8 !

0 7 < = > 6 0 2 0 = 5:

7 2 J @ H 2 0 A 5 G @ 5 7 @ 0 7 4 5 ; O = 5 = 0 : > @ 5 = 0 .
! ; 5 4 : 0 B > ? @ 5 F J D B 8 A B 0 @ > B > @ 0 A B 5 = 8 5 ? > A B 5 ? 5 ==> C < 8 @ 0
8 > B = 5 3 > 8 7 @ 0 A B 2 0 B = O : > ; : > 8 7 4 J = : 8 . 0 7 4 5 ; O 9 B 5 3 8
2 = 8 < 0 B 5 ; = > , 1 5 7 4 0 = 0 @ 0 = O 2 0 B 5 : > @ 5 = 8 B 5 .

@ > 1 ; 5 < 8:

- : > A 5 ? > O 2 O B B J < = 8 ? 5 B = 0 , > 7 = 0 G 0 2 0 , G 5 A 5 5 ? > O 2 8 ; >
7 0 3 = 8 2 0 = 5 > 1 @ 0 1 > B 2 0 B A 5 A J A A ? 8 @ B 8 A 5 ? > A 8 ? 2 0 B A
2 J 3 ; 5 = = 0 ? @ 0 E .

@ 5 4 8 B 5 ; 8:

- : 0 @ 8 ? @ 5 4 ? > A B 0 2 : 0 7 0 ? > O 2 0 B 0 8 < 5 = 5 4 > A B 0 B J G = 0 B 0
2 ; 0 6 = > A B = 0 2 J 7 4 C E 0 .

> 3 0 B > A 5 = 0 ; 0 3 0 B @ 5 B 8 @ 0 = 5 = 0 @ 0 A B 5 = 8 5 B > A ? @ 5 ? 0 @ 0 B 8
A @ 5 I C 2 @ 5 4 8 B 5 ; 8 , B @ O 1 2 0 4 0 A 5 2 = 8 < 0 2 0 ? @ 5 ? 0 @ 0 B J B 4 0 = 5
> A B 0 = 5 2 @ > 7 5 B : 0 B 0 .