1 C B 8 ; > =, A B 0 5 = : ; 5 = - Abutilon

gradinar, A J 1 > B 0 07 N ; 8 2012 - 19:38:37

& J D B 5 6: 0 ? @ 8 ;- A 5 ? B 5 < 2 @ 8   ! 5 < 5 9 A B 2 >: Malvaceae (A ; 5 7 > 2 8)
 > 4 8 = 0: B @ > ? 8 F 8, A C 1 B @ > ? 8 F 8
 @ C 3 > B 8 < 5 = 0 1 C B 8 ; > = J B 5 !B 0 5 = : ; 5 =.
 1 C B 8 ; > = J B 5 2 5 G = > 7 5 ; 5 = > 4 J @ 2 > 4 > A B 8 3 0 I > 4 > 80-120
A 0 = B 8 < 5 B @ 0. 8 A B 0 B 0 < C A 0 < J E 5 A B 8 8 ? J A B @ 8 8 ; 8
: ; 5 = > 2 8 4 = > 7 5 ; 5 = 8. < 0 : @ 5 E : > A B J 1 ; >. 1 C B 8 ; > = J B
@ 0 A B 5 1 J @ 7 >.
" 5 7 8 < ; 2 8 A 0 > A > 1 5 = > > G 0 @ > 2 0 B 5 ; = 8 A @ 0 7 = > > 1 @ 0 7 = 8 B 5
A 8 F 2 5 B 2 5: 1 5 ; 8, 6 J ; B 8, @ > 7 2 8 8 G 5 @ 2 5 = 8. A. megapotamicum
? > 4 : C ? 2 0 A ? @ 5 : @ 0 A > > D > @ < 5 = 8 B 5 F 2 5 B 8 :0 < 1 0 = 8,
A J G 5 B 0 8 > B 6 J ; B 8 8 ? C @ ? C @ = 8 G 0 H 8. 0 A B 5 = 8 5 B > ? > G 2 0 40
F J D B 8 ? @ 5 7 ? @ > ; 5 B B 0, B 0 G 0: 4 > : J A => B > ; O B>. @ 5 1 = 8 O B
E @ 0 A B, :>9 B> 2 A B 0 O B 0 <>6 5 40 A 5 ? @ 5 2 J @ = 5 2 4 @ J 2 G 5, 8 < 0
: 0 4 8 D 5 => < 5 8, <J E 5 A B 8 ; 8 A B 0.

B 3 ; 5 6 4 0 = 5 0 1 C B 8 ; > = J B:
O A B > = 0 1 C B 8 ; > = J B:

" > 2 0 5 B @ > ? 8 G 5 A : > @ 0 A B 5 = 8 5 8 A 5 = C 6 4 0 5 > B < = > 3 >
A ; J = F 5. @ 5 4 ? > G 8 B 0 4 0 A B > 8 = 0 1 0 ; : > = 0 8 ; 8 B 5 @ 0 A 0 B 0.
 0 7 2 8 2 0 A 5 4 > 1 @ 5 8 2 B > ? ; 0 A B 0 O, = > 7 8 < C 2 0 ? @ 8 B 5 < ? 5 @ 0 B C @ 0
12-15 ° !, 8 = 0 G 5 ? @ 5 7 A ; 5 4 2 0 I 0 B 0 3 > 4 8 = 0 = O < 0 4 0 F J D B 8.
 0 A B 5 = 8 O B 0, : > 8 B > A 0 ? @ 5 7 8 < C 2 0 ; 8 = 0 B > ? ; >, < > 3 0 B 4 0 1 J 4 0 B
= 0 ? 0 4 = 0 B 8 > B 0 : 0 @ 8 ; 8 8 2 J H : 8. 7 = 0 A O 9 B 5 1 C B 8 ; > = J B ? @ 5 7
; O B > B > = 0 2 J =, 0 ? @ 5 7 7 8 < 0 B 0 3 > ? @ 8 8 @ 0 9 B 5 0 7 0 : @ 8 B >.
" > 3 0 2 0 5 = C 6 > = > 4 0 < C 1 J 4 5 > A 8 3 C @ 5 = ? > : > 9 8
B 5 < ? 5 @ 0 B C @ B 0 4 0 1 J 4 5 2 @ 0 < : 8 B 5 = 0 12-15 3 @ 0 4 C A 0.

" 5 < ? 5 @ 0 B C @ 0 7 0 1 C B 8 ; > = J B:
 @ 5 7 ; 5 B = 8 B 5 < 5 A 5 F 8 3 ; 5 4 0 9 B 5 B 5 < ? 5 @ 0 B C @ 0 B 0 4 0 5 > : > ; >
22-26 3 @ 0 4 C A 0. 0 : > > ? 8 A 0 E < 5 ? > - 3 > @ 5 7 8 < > 2 @ 5 < 5 B @ O 1 2 0 4 0
5 12-15 3 @ 0 4 C A 0. " > 2 0 ? > < 0 3 0 7 0 A ; 5 4 2 0 I 8 O F J D B 5 6.

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

! 2 5 B ; 8 = 0 7 0   1 C B 8 ; > = J B:
 1 C B 8 ; > = J B > 1 > 6 0 2 0 < = > 3 > A 2 5 B ; 8 = 0. ; 5 4 0 9 B 5 > 1 0 G 5 4 0
= 5 3 > ? 0 @ O B 4 8 @ 5 : B = > A ; J G 5 2 8 B 5 ; J G 8. " > 2 0 < > 6 5 4 0
4 > 2 5 4 5 4 > 8 7 A J E 2 0 = 5 = 0 ; 8 A B 0 B 0 < C. > 6 5 4 0 3 > ? > A B 0 2 8 B 5
= 0 H 0 @ 5 0 A O = : 0. 1 C B 8 ; > = J B ? @ 5 4 ? > G 8 B 0 < 5 A B 0 A 87 B > G 8
87 ; > 6 5 = O.

> ; 8 2 0 = 5 = 0   1 C B 8 ; > =:
 > 2 @ 5 < 5 = 0 ; 5 B = 8 B 5 < 5 A 5 F 8 ? > ; 8 2 0 9 B 5 1 C B 8 ; > = J B
> 1 8 ; = >. ; 5 4 0 9 B 5 4 0 8 7 1 O 3 2 0 B 5 ? @ 5 ? > ; 8 2 0 5 B >. > 2 @ 5 < 5
= 0 7 8 < < 8 B 5 < 5 A 5 F 8 ? > ; 8 2 0 9 B 5 < 0 ; : >, : 0 B > 3 ; 5 4 0 B 5 ? @ J A B B 0
4 0 5 7 0 A E = 0 ; 0 ? @ 5 4 8 A ; 5 4 2 0 I > B > ? > ; 8 2 0 5.
 @ 5 ? > ; 8 2 0 5 B > 8 8 ? A 0 B 0 = 0 ? > ; 8 2 0 5 < > 6 5 4 0 A 0 D 0 B 0 ; = 8
7 0   1 C B 8 ; > = J B 8 4 0 < C : 0 ? O B ; 8 A B 0 B 0 8 F 2 5 B > 2 5 B 5.
 @ 5 ? > ; 8 2 0 5 B > 8 8 87 A J E 2 0 = 5 = 0 ? > G 2 0 B 0 < > 6 5 4 0 4 > 2 5 4 5
7 0 3 = 8 2 0 5, > : 0 ? 2 0 = 5 = 0 ; 8 A B 0 B 0 8 8 F 2 5 B > 2 5 B 5 8 8
? J ? : 8 B 5.

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

> ; 5 A B 8 8 2 @ 5 4 8 B 5 ; 8 ? >   1 C B 8 ; > = J B:

09 G5AB8B5 2@548B5;8 ?> 1CB8;>=0 A0 :0@8B5,
5;>:@8;:8B5, 0<C::89:8, "@8?A, 8AB=8B5 2JH:8.,
)8B>=>AB=8 2JH:88 ?09F8=>>1@07C20I0:0@. > AB0@8B5
@0AB5=8O A0 ?>-<0;:> CO728<8, => ?>-<;048B5 8 ?>-A;018B5
@0AB5=8O <>65 40 7038=0B ?@8 ;8?A0 =0 @50:F8O. @8
>B:@820=5 =0 2@548B5;8 B@O120 40 ?>G8AB8B5 2A8G:8
=0?04=0B8 ;8AB0 >B 425B5 AB@0=8 AJA A0?C=5=0 3J10. @8
3>;5<8 ?>@065=85 5 =5>1E>48<> 40 87?>;720B5
8=A5:B8F84. @8 =0?045=85 >B G5@25=8 0:0@8 B@O120 40
C25;8G8B5 2;06=>ABB0 =0 @0AB5=85B>.

@5A0640=5 =0 1CB8;>=JB:

@5A06409B5 1CB8;>=JB 2A5:0 ?@>;5B. 7?>;7209B5 =>20
1>30B08 ?@>?CA:;820 ?>G20. ;5409B5 =>20B0 A0:A8O =0
1CB8;>=JB 40 5 <0;:> ?>-3>;O<0 >B AB0@0@0B0, BJ9 :0B>
EC102 8 >18;5= FJDB56 A5 ?>AB830 A0<> :>30B> :>@5=8B5
=0 @0AB5=85B> A0 >1E20=0;8 ?;JB=> ?>G20B0. @8
?@5A0640=5 87?>;7209B5 A;54=0B0 :>=D83C@0F8O =0
?>G20B0 B>@D: EC<CA: 3>@A:0 ?>G20: G0AB ;8AB=0: ?OAJ: 2
A;54=>B> AJ>B=>H5=85 1:1:1:1:1.

>4@O720=5 =0 1CB8;>=0:

@8 ?>4@O720=5 =0 1CB8;>=JB A5 ?>AB830 ?> 4J;J3
?5@8>4 =0 FJDB5=5. >4@O720=5B> A5 ?@028 >:>:> A@540B0
=0 ;OB>B> A@540B0 =0N;8 =0G0;>B> =0 023CAB :0B> A5
87@O720B 2A8G:8 >157;8AB5=8, 87AJE=0;8 88 871CO;8
:;>=5=8. 4@028B5 :;>==8 ?>4@565B5 =0 54=0 B@5B0 >B
4J;68=0B0 8<.

@86870 1CB8;>=0:

B<0@B 4>023CAB <0;20B0 A5 ?>;820 >18;=> 8 A5 B>@8 2AO:0
A54<8F0. @57 >AB0=0;8B5 <5A5F8 ?>;820=5B> A5
>3@0=8G020 A8;=>=, 0 B>@@5=5B> A5 A?8@0. 0AB5=8O, :>8B> A0
18;8 =02J8 A0 ?>@0=0=8B8 B2J@45 <>>3>, <>30B 40 A5
?>4@560B ?@57 5A5=B0, ?@548 40 A5 >B=5A0B 278<=0B08<
:20@B8@0. @57 ?@>;5BB0 A5 ?@5A0640B 2 ?>OA0 =0 3@048=:0
?@JA0B. !J25B20<5 28 40 O ?>4>1@8B5 A <0;:> H8=0.

07<=>6020=5 =0 1CB8;>=0:

>65B5 40 @07<=>6020B5 1CB8;>=0 ?>A@54AB2>< A5<5=0
8;8 @57=8F8. !>@>B25B5 :>8B> A0 075;5=>;8AB=8 <>65B5 40
@07<=>68B5 ?> 420B0 =0G8=0, 0 ?JAB@ @>;8A=8AB5 3;02=>
?>A@54AB2>< @57=8F8. @8 @07<=>65 ?>G20B0 B@O120
40 8<0 B5<?5@0BC@0 >B >:>;> 22-25 3@04CA0 82;06=>ABB0 =0
2J74CE0 40 5 28A>:0.

07<=>6020=5 G@57 @57=8F8 =0 1CB8;>=:

> A B 0 2 5 B 5 @ 5 7 = 8 F 8 B 5 2 J 2 2 > 4 0 8 ; 8 > 2 ; 0 6 = 5 = ? O A J :.

 0 ? @ 0 2 5 B 5 B > 2 0 = 0 ? @ > ; 5 B, ? @ 8 8 7 : ; N G 8 B 5 ; = 8 A ; C G 0 9 ? @ 5 7

> A B 0 = 0 ; > B > 2 @ 5 < 5.   @ > A O 2 0 9 B 5 4 > 1 @ 5 < ; 0 4 > B > @ 0 A B 5 = 8 5

7 0 4 0 ? > ; C G 8 B 5 4 > 1 @ 5 @ 0 7 : ; > = 5 = 0 : > @ 0 = 0.   > 4 @ 5 6 5 B 5

@ 0 7 B 5 = 8 5 B > 2 : @ 0 O = 0 A 5 ? B 5 < 2 @ 8, = 0 G 0 ; > B > = 0 > : B > < 2 @ 8

8 ; 8 ? @ 8 8 7 : ; N G 8 B 5 ; = 8 A ; C G 0 9 ? @ 5 7 > A B 0 = 0 ; > B > 2 @ 5 < 5 ? >

2 0 H 0 ? @ 5 F 5 = : 0.   @ 8 = 5 > 1 E > 4 8 < > A B B @ O 1 2 0 4 0 ? > A B 0 2 8 B 5

? > 4 ? > @ 0 = 0 A B J 1 ; > B >.   > G 2 5 = 0 B 0 A < 5 A B @ O 1 2 0 4 0 5 ? O A J : 8

3 > @ A : 0 ? > G 2 0.

0 7 < = > 6 0 2 0 = 5 = 0   1 C B 8 ; > = G @ 5 7 A 5 < 5 = 0:

 @ 5 7 ? @ > ; 5 B B 0 7 0 A 5 9 B 5 A 5 < 5 = 0 B 0. " 5 I 5 ? > = 8 : = 0 B 7 0

> : > ; > 20 4 = 8.   7 ? > ; 7 2 0 9 B 5 ? 5 A 0 G ; 8 2 0 ? > G 2 0 : B > ? > : @ 8 B 5

A 5 < 5 = 0 B 0 A J A A ; > 9 > B : > ; ; > < 8 ; 8 < 5 B @ 0. ! ; 5 4 : 0 B >

C : @ 5 ? = 5 @ 0 7 A 0 4 0 3 > ? 8 : 8 @ 0 9 B 5 2 A 0 : A 8 8.

! J 2 5 B = 0 3 @ 0 4 8 = 0 @ O:

 : > 0 1 C B 8 ; > = J B A B > 8 ? > A B > O = = > 2 A B 0 O B 0, 5 4 > 1 @ 5 > B

2 @ 5 < 5 = 0 2 @ 5 < 5 4 0 A 5 > @ > A O 2 0.

O : > 9 2 8 4 > 2 5   1 C B 8 ; > =:

- Abutilon Bella
- Abutilon Maximus
- Abutilon Giant