

OG0000652\_249\_before

Magnoliopsida\_GLY\_0040506  
Magnoliopsida\_GLY\_0040508  
Magnoliopsida\_GLY\_0040507  
Magnoliopsida\_GLY\_0043138  
Magnoliopsida\_PHA\_0013567  
Magnoliopsida\_PHA\_0013568  
Magnoliopsida\_MED\_0019553  
Magnoliopsida\_MED\_0019556  
Magnoliopsida\_MED\_0019555  
Magnoliopsida\_MED\_0019554  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.09g01987  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.13g00529  
Magnoliopsida\_GLY\_0054083  
Magnoliopsida\_GLY\_0054086  
Magnoliopsida\_GLY\_0054085  
Magnoliopsida\_GLY\_0054084  
Magnoliopsida\_GLY\_0049939  
Magnoliopsida\_PHA\_0036958  
Magnoliopsida\_CEC\_0009570  
Magnoliopsida\_LOC107613469  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A08g01354  
Magnoliopsida\_GLY\_0040501  
Magnoliopsida\_GLY\_0040504  
Magnoliopsida\_GLY\_0040503  
Magnoliopsida\_GLY\_0040505  
Magnoliopsida\_GLY\_0040502  
Magnoliopsida\_GLY\_0043135  
Magnoliopsida\_GLY\_0043137  
Magnoliopsida\_GLY\_0043136  
Magnoliopsida\_PHA\_0015391  
Magnoliopsida\_PHA\_0015393  
Magnoliopsida\_PHA\_0015392  
Magnoliopsida\_MED\_0010459  
Magnoliopsida\_MED\_0010460  
Magnoliopsida\_LOC107629120  
Magnoliopsida\_CEC\_0022880  
Magnoliopsida\_PRU\_0012477  
Magnoliopsida\_PRU\_0012482  
Magnoliopsida\_PRU\_0012479  
Magnoliopsida\_PRU\_0012480  
Magnoliopsida\_PRU\_0012481  
Magnoliopsida\_PRU\_0012478  
Magnoliopsida\_POP\_0026327  
Magnoliopsida\_POP\_0026329  
Magnoliopsida\_POP\_0026328  
Magnoliopsida\_ACT\_0036067  
Magnoliopsida\_VIT\_0024116  
Magnoliopsida\_ARA\_0000460  
Magnoliopsida\_ARA\_0024299  
Magnoliopsida\_ARA\_0015687  
Magnoliopsida\_SOL\_0005322  
Magnoliopsida\_HEL\_0018457  
Magnoliopsida\_HEL\_0044718  
Magnoliopsida\_COF\_0001258  
Magnoliopsida\_CUC\_0000387  
Magnoliopsida\_CUC\_0000390  
Magnoliopsida\_CUC\_0000389  
Magnoliopsida\_CUC\_0000388  
Magnoliopsida\_CUC\_0000391  
Magnoliopsida\_CUC\_0014014  
Magnoliopsida\_CUC\_0014015  
Magnoliopsida\_CUC\_0014016  
Magnoliopsida\_POP\_0035901  
Magnoliopsida\_POP\_0035903  
Magnoliopsida\_POP\_0035902  
Magnoliopsida\_POP\_0046514  
Magnoliopsida\_POP\_0046516  
Magnoliopsida\_POP\_0046515  
Magnoliopsida\_PRU\_0004027  
Magnoliopsida\_PRU\_0004029  
Magnoliopsida\_PRU\_0004032  
Magnoliopsida\_PRU\_0004035  
Magnoliopsida\_PRU\_0004031  
Magnoliopsida\_PRU\_0004033  
Magnoliopsida\_PRU\_0004034  
Magnoliopsida\_PRU\_0004030  
Magnoliopsida\_PRU\_0004028  
Magnoliopsida\_VIT\_0019948  
Magnoliopsida\_MIM\_0020536  
Magnoliopsida\_MIM\_0020537  
Magnoliopsida\_MIM\_0021550  
Magnoliopsida\_HEL\_0050090  
Magnoliopsida\_SOL\_0010831  
Magnoliopsida\_COF\_0006412  
Magnoliopsida\_ACT\_0025385  
Magnoliopsida\_AQU\_0026295  
Magnoliopsida\_AQU\_0026297  
Magnoliopsida\_AQU\_0026296  
Magnoliopsida\_AQU\_0023137  
Magnoliopsida\_AQU\_0023138  
Magnoliopsida\_AQU\_0027624  
Magnoliopsida\_AQU\_0027625  
Magnoliopsida\_AQU\_0025815  
Magnoliopsida\_BRA\_0001130  
Magnoliopsida\_BRA\_0001131  
Magnoliopsida\_ORY\_0019841  
Magnoliopsida ASP\_0009168  
Magnoliopsida\_LIR\_0029720  
Magnoliopsida\_LIR\_0029723  
Magnoliopsida\_LIR\_0029724  
Magnoliopsida\_LIR\_0029722  
Magnoliopsida\_LIR\_0029721  
Magnoliopsida ASP\_0005451  
Magnoliopsida ASP\_0017851  
Magnoliopsida LIR\_0006891  
Magnoliopsida LIR\_0006892  
Magnoliopsida LIR\_0027327  
Magnoliopsida CIN\_0002746  
Magnoliopsida CIN\_0011551  
Polypodiopsida\_CER\_0023690  
Polypodiopsida\_CER\_0023691  
Polypodiopsida\_CER\_0023692  
Marchantiopsida\_MAR\_0007534  
Ginkgopsisida\_GIN\_0017611  
Ginkgopsisida\_GIN\_0025780  
Magnoliopsida\_NYM\_0043204  
Magnoliopsida\_NYM\_0043206  
Magnoliopsida\_NYM\_0043205  
Magnoliopsida\_NYM\_0002833  
Magnoliopsida\_NYM\_0002834  
Magnoliopsida\_AMB\_0007372  
Magnoliopsida\_AMB\_0013481  
Magnoliopsida\_GLY\_0035199  
Magnoliopsida\_GLY\_0044119  
Magnoliopsida\_GLY\_0047195  
Magnoliopsida\_PHA\_0036995  
Magnoliopsida\_LOC107648706  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A06g01489  
Magnoliopsida\_LOC107625212  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.12g01454  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A02g01253  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.02g01259  
Magnoliopsida\_MED\_0003107  
Magnoliopsida\_CEC\_0005584  
Magnoliopsida\_PHU\_0013122  
Magnoliopsida\_PRU\_0013123  
Magnoliopsida\_CUC\_0023575  
Magnoliopsida\_CUC\_0023576  
Magnoliopsida\_CUC\_0023574  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A05g02660  
Magnoliopsida\_POP\_0005448  
Magnoliopsida\_POP\_0005449  
Magnoliopsida\_POP\_0048182  
Magnoliopsida\_ARA\_0019569  
Magnoliopsida\_VIT\_0003295  
Magnoliopsida\_MIM\_0021935  
Magnoliopsida\_MIM\_0021936  
Magnoliopsida\_MIM\_0015745  
Magnoliopsida\_COF\_0014939  
Magnoliopsida\_SOL\_0007571  
Magnoliopsida\_SOL\_0008227  
Magnoliopsida\_SOL\_0018659  
Magnoliopsida\_ACT\_0025343  
Magnoliopsida\_ACT\_0030351  
Magnoliopsida\_COF\_0009777  
Magnoliopsida\_HEL\_0026124  
Magnoliopsida\_HEL\_0048664  
Magnoliopsida\_HEL\_0015702  
Magnoliopsida\_ASP\_0008044  
Magnoliopsida\_BRA\_0007440  
Magnoliopsida\_ORY\_0018443  
Magnoliopsida\_BRA\_0042934  
Magnoliopsida\_ORY\_0015372  
Magnoliopsida\_AQU\_0023818  
Magnoliopsida\_ASP\_0017887  
Magnoliopsida\_LIR\_0028211  
Magnoliopsida\_LIR\_0028212  
Magnoliopsida\_LIR\_0028213  
Magnoliopsida\_LIR\_0028214  
Magnoliopsida\_AMB\_0014536  
Magnoliopsida\_NYM\_0042265  
Magnoliopsida\_NYM\_0042266  
Ginkgopsisida\_GIN\_0022163  
Magnoliopsida\_HEL\_0025917  
Polypodiopsida\_CER\_0045544  
Polypodiopsida\_CER\_0045546  
Polypodiopsida\_CER\_0045548  
Polypodiopsida\_CER\_0045549  
Polypodiopsida\_CER\_0045547  
Polypodiopsida\_CER\_0045545  
Polypodiopsida\_CER\_0015699  
Polypodiopsida\_CER\_0015700  
Polypodiopsida\_CER\_0036810  
Polypodiopsida\_CER\_0036811  
Polypodiopsida\_CER\_0036812  
Polypodiopsida\_CER\_0041186  
Polypodiopsida\_CER\_0041187  
Marchantiopsida\_MAR\_0002639  
Ginkgopsisida\_GIN\_0008271  
Ginkgopsisida\_GIN\_0026895  
Magnoliopsida\_AMB\_0008556  
Magnoliopsida\_GLY\_0003361  
Magnoliopsida\_GLY\_0034813  
Magnoliopsida\_PHA\_0025484  
Magnoliopsida\_GLY\_0010132  
Magnoliopsida\_GLY\_0069919  
Magnoliopsida\_PHA\_0027628  
Magnoliopsida\_LOC107626160  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.12g03072  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A02g02839  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.02g02740  
Magnoliopsida\_MED\_0004405  
Magnoliopsida\_MED\_0023233  
Magnoliopsida\_MED\_0035564  
Magnoliopsida\_POP\_0002432  
Magnoliopsida\_POP\_0015739  
Magnoliopsida\_ACT\_0013805  
Magnoliopsida\_ACT\_0013914  
Magnoliopsida\_ACT\_0010080  
Magnoliopsida\_PHU\_0006945  
Magnoliopsida\_ARA\_0001288  
Magnoliopsida\_ARA\_0020725  
Magnoliopsida\_CUC\_0006747  
Magnoliopsida\_AQU\_0029939  
Magnoliopsida\_SOL\_0024448  
Magnoliopsida\_SOL\_0030680  
Magnoliopsida\_MIM\_0022838  
Magnoliopsida\_COF\_0009776  
Magnoliopsida\_COF\_0002083  
Magnoliopsida\_SOL\_0009054  
Magnoliopsida\_MIM\_0006669  
Magnoliopsida\_AQU\_0005151  
Magnoliopsida\_CIN\_0003013  
Magnoliopsida\_CIN\_0010442  
Magnoliopsida\_LIR\_0000726  
Magnoliopsida\_LIR\_0006609  
Magnoliopsida\_LOC107637642  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.14g01243  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A04g01107  
Magnoliopsida\_MED\_0023037  
Magnoliopsida\_GLY\_0025418  
Magnoliopsida\_GLY\_0060299  
Magnoliopsida\_PHA\_0002599  
Magnoliopsida\_CEC\_0011273  
Magnoliopsida\_HEL\_0034484  
Magnoliopsida\_PHU\_0045920  
Magnoliopsida\_VIT\_0031730  
Magnoliopsida\_VIT\_0021083  
Magnoliopsida\_NYM\_0043930  
Magnoliopsida ASP\_0007996  
Magnoliopsida BRA\_0031905  
Magnoliopsida ORY\_0012226  
Magnoliopsida BRA\_0041141  
Magnoliopsida ORY\_0035869  
Magnoliopsida BRA\_0002552  
Magnoliopsida ORY\_0009116  
Chlorophyceae\_CHL\_0014142  
Chlorophyceae\_DUN\_0001482

OG0000652\_249\_after

Magnoliopsida\_GLY\_0040506  
Magnoliopsida\_GLY\_0040508  
Magnoliopsida\_GLY\_0040507  
Magnoliopsida\_GLY\_0043138  
Magnoliopsida\_PHA\_0013567  
Magnoliopsida\_PHA\_0013568  
Magnoliopsida\_MED\_0019553  
Magnoliopsida\_MED\_0019556  
Magnoliopsida\_MED\_0019555  
Magnoliopsida\_MED\_0019554  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.09g01987  
Magnoliopsida\_arharahy.Tifrunner.gnm1.Arahy.13g00529  
Magnoliopsida\_GLY\_0054083  
Magnoliopsida\_GLY\_0054086  
Magnoliopsida\_GLY\_0054085  
Magnoliopsida\_GLY\_0054084  
Magnoliopsida\_GLY\_0049939  
Magnoliopsida\_PHA\_0036958  
Magnoliopsida\_CEC\_0009570  
Magnoliopsida\_LOC107613469  
Magnoliopsida\_ardaradu.V14167.gnm1.Arudu.A08g01354  
Magnoliopsida\_GLY\_0040501  
Magnoliopsida\_GLY\_0040504  
Magnoliopsida\_GLY\_0040503  
Magnoliopsida\_GLY\_0040505  
Magnoliopsida\_GLY\_0040502  
Magnoliopsida\_GLY\_0043135  
Magnoliopsida\_GLY\_0043137  
Magnoliopsida\_GLY\_0043136  
Magnoliopsida\_PHA\_0015391  
Magnoliopsida\_PHA\_0015393  
Magnoliopsida\_PHA\_0015392  
Magnoliopsida\_MED\_0010459  
Magnoliopsida\_MED\_0010460  
Magnoliopsida\_LOC107629120  
Magnoliopsida\_CEC\_0022880  
Magnoliopsida\_PRU\_0012477  
Magnoliopsida\_PRU\_0012482  
Magnoliopsida\_PRU\_0012479  
Magnoliopsida\_PRU\_0012480  
Magnoliopsida\_PRU\_0012481  
Magnoliopsida\_PRU\_0012478  
Magnoliopsida\_POP\_0026327  
Magnoliopsida\_POP\_0026329  
Magnoliopsida\_POP\_0026328  
Magnoliopsida\_ACT\_0036067  
Magnoliopsida\_VIT\_0024116  
Magnoliopsida\_ARA\_0000460  
Magnoliopsida\_ARA\_0024299  
Magnoliopsida\_ARA\_0015687  
Magnoliopsida\_SOL\_0005322  
Magnoliopsida\_HEL\_0018457  
Magnoliopsida\_HEL\_0044718  
Magnoliopsida\_COF\_0001258  
Magnoliopsida\_CUC\_0000387  
Magnoliopsida\_CUC\_0000390  
Magnoliopsida\_CUC\_0000389  
Magnoliopsida\_CUC\_0000388  
Magnoliopsida\_CUC\_0000391  
Magnoliopsida\_CUC\_0014014  
Magnoliopsida\_CUC\_0014015  
Magnoliopsida\_CUC\_0014016  
Magnoliopsida\_POP\_0035901  
Magnoliopsida\_POP\_0035903  
Magnoliopsida\_POP\_0035902  
Magnoliopsida\_POP\_0046514  
Magnoliopsida\_POP\_0046516  
Magnoliopsida\_POP\_0046515  
Magnoliopsida\_PRU\_0004027  
Magnoliopsida\_PRU\_0004029  
Magnoliopsida\_PRU\_0004032  
Magnoliopsida\_PRU\_0004035  
Magnoliopsida\_PRU\_0004031  
Magnoliopsida\_PRU\_0004033  
Magnoliopsida\_PRU\_0004034  
Magnoliopsida\_PRU\_0004030  
Magnoliopsida\_PRU\_0004028  
Magnoliopsida\_VIT\_0019948  
Magnoliopsida\_MIM\_0020536  
Magnoliopsida\_MIM\_0020537  
Magnoliopsida\_MIM\_0021550  
Magnoliopsida\_HEL\_0050090  
Magnoliopsida\_SOL\_0010831  
Magnoliopsida\_COF\_0006412  
Magnoliopsida\_ACT\_0025385  
Magnoliopsida\_AQU\_0026295  
Magnoliopsida\_AQU\_0026297  
Magnoliopsida\_AQU\_0026296  
Magnoliopsida\_AQU\_0023137  
Magnoliopsida\_AQU\_0023138  
Magnoliopsida\_AQU\_0027624  
Magnoliopsida\_AQU\_0027625  
Magnoliopsida\_AQU\_0025815  
Magnoliopsida\_BRA\_0001130  
Magnoliopsida\_BRA\_0001131  
Magnoliopsida\_ORY\_0019841  
Magnoliopsida ASP\_0009168  
Magnoliopsida\_LIR\_0029720  
Magnoliopsida\_LIR\_0029723  
Magnoliopsida\_LIR\_0029724  
Magnoliopsida\_LIR\_0029722  
Magnoliopsida\_LIR\_0029721  
Magnoliopsida ASP\_0005451  
Magnoliopsida LIR\_0006891  
Magnoliopsida LIR\_0006892  
Magnoliopsida LIR\_0027327  
Magnoliopsida CIN\_0002746  
Magnoliopsida CIN\_0011551  
Magnoliopsida CER\_0023690  
Magnoliopsida CER\_0023691  
Magnoliopsida CER\_0023692  
Magnoliopsida MAR\_0007534  
Ginkgopsisida GIN\_0017611  
Ginkgopsisida GIN\_0025780  
Magnoliopsida NYM\_0043204  
Magnoliopsida NYM\_0043206  
Magnoliopsida NYM\_0043205  
Magnoliopsida NYM\_0002833  
Magnoliopsida NYM\_0002834  
Magnoliopsida AMB\_0007372  
Magnoliopsida AMB\_0013481  
Magnoliopsida GLY\_0035199  
Magnoliopsida GLY\_0044119  
Magnoliopsida GLY\_0047195  
Magnoliopsida PHA\_0036995  
Magnoliopsida LOC107648706  
Magnoliopsida ardaradu.V14167.gnm1.Arudu.A06g01489  
Magnoliopsida LOC107625212  
Magnoliopsida arharahy.Tifrunner.gnm1.Arahy.12g01454  
Magnoliopsida ardaradu.V14167.gnm1.Arudu.A02g01253  
Magnoliopsida arharahy.Tifrunner.gnm1.Arahy.02g01259  
Magnoliopsida MED\_0003107  
Magnoliopsida CEC\_0005584  
Magnoliopsida PRU\_0013122  
Magnoliopsida PRU\_0013123  
Magnoliopsida CUC\_0023575  
Magnoliopsida CUC\_0023576  
Magnoliopsida CUC\_0023574  
Magnoliopsida ardaradu.V14167.gnm1.Arudu.A05g02660  
Magnoliopsida POP\_0005448  
Magnoliopsida POP\_0005449  
Magnoliopsida POP\_0048182  
Magnoliopsida ARA\_0019569  
Magnoliopsida VIT\_0003295  
Magnoliopsida MIM\_0021935  
Magnoliopsida MIM\_0021936  
Magnoliopsida COF\_0014939  
Magnoliopsida SOL\_0007571  
Magnoliopsida SOL\_0008227  
Magnoliopsida SOL\_0018659  
Magnoliopsida ACT\_0025343  
Magnoliopsida ACT\_0030351  
Magnoliopsida COF\_0009777  
Magnoliopsida HEL\_0026124  
Magnoliopsida HEL\_0048664  
Magnoliopsida HEL\_0015702  
Magnoliopsida ASP\_0008044  
Magnoliopsida BRA\_0007440  
Magnoliopsida ORY\_0018443  
Magnoliopsida BRA\_0042934  
Magnoliopsida ORY\_0015372  
Magnoliopsida AQU\_0023818  
Magnoliopsida ASP\_0017887  
Magnoliopsida LIR\_0028211  
Magnoliopsida LIR\_0028212  
Magnoliopsida LIR\_0028213  
Magnoliopsida LIR\_0028214  
Magnoliopsida LIR\_0028213  
Magnoliopsida LIR\_0028214  
Magnoliopsida LIR\_0028215  
Magnoliopsida LIR\_0028216  
Magnoliopsida LIR\_0028217  
Magnoliopsida LIR\_0028218  
Magnoliopsida LIR\_0028219  
Magnoliopsida LIR\_0028220  
Magnoliopsida LIR\_0028221  
Magnoliopsida LIR\_0028222  
Magnoliopsida LIR\_0028223  
Magnoliopsida LIR\_0028224  
Magnoliopsida LIR\_0028225  
Magnoliopsida LIR\_0028226  
Magnoliopsida LIR\_0028227  
Magnoliopsida LIR\_0028228  
Magnoliopsida LIR\_0028229  
Magnoliopsida LIR\_0028230  
Magnoliopsida LIR\_0028231  
Magnoliopsida LIR\_0028232  
Magnoliopsida LIR\_0028233  
Magnoliopsida LIR\_0028234  
Magnoliopsida LIR\_0028235  
Magnoliopsida LIR\_0028236  
Magnoliopsida LIR\_0028237  
Magnoliopsida LIR\_0028238  
Magnoliopsida LIR\_0028239  
Magnoliopsida LIR\_0028240  
Magnoliopsida LIR\_0028241  
Magnoliopsida LIR\_0028242  
Magnoliopsida LIR\_0028243  
Magnoliopsida LIR\_0028244  
Magnoliopsida LIR\_0028245  
Magnoliopsida LIR\_0028246  
Magnoliopsida LIR\_0028247  
Magnoliopsida LIR\_0028248  
Magnoliopsida LIR\_0028249  
Magnoliopsida LIR\_0028250  
Magnoliopsida LIR\_0028251  
Magnoliopsida LIR\_0028252  
Magnoliopsida LIR\_0028253  
Magnoliopsida LIR\_0028254  
Magnoliopsida LIR\_0028255  
Magnoliopsida LIR\_0028256  
Magnoliopsida LIR\_0028257  
Magnoliopsida LIR\_0028258  
Magnoliopsida LIR\_0028259  
Magnoliopsida LIR\_0028260  
Magnoliopsida LIR\_0028261  
Magnoliopsida LIR\_0028262  
Magnoliopsida LIR\_0028263  
Magnoliopsida LIR\_0028264  
Magnoliopsida