



# ANNALS OF BOTANY

Founded 1887

Volume 112

Number 7

November 2013



[www.aob.oxfordjournals.org](http://www.aob.oxfordjournals.org)

ISSN 0305-7364 (PRINT)  
ISSN 1095-8290 (ONLINE)

---

# ANNALS OF BOTANY

Founded 1887

---

Volume 112 Number 7 November 2013

Content *Snapshots* i

Plant Cuttings: news in botany v

## VIEWPOINT

---

Levin, D. A. The timetable for allopolyploidy in flowering plants 1201

---

## INVITED REVIEW

---

Shabala, S. Learning from halophytes: physiological basis and strategies to improve abiotic stress tolerance in crops 1209

---

## RESEARCH IN CONTEXT

---

Morfopoulos, C., Prentice, I. C., Keenan, T. F., Friedlingstein, P., Medlyn, B. E., Peñuelas, J. and Possell, M. A unifying conceptual model for the environmental responses of isoprene emissions from plants 1223

---

## ORIGINAL ARTICLES

---

Liu, S., Sun, Y., Du, X., Xu, Q., Wu, F. and Meng, Z. Analysis of the *APETALA3*- and *PISTILLATA*-like genes in *Hedyosmum orientale* (Chloranthaceae) provides insight into the evolution of the floral homeotic B-function in angiosperms 1239

---

---

López-Fernández, M. P. and Maldonado, S. Ricinosomes provide an early indicator of suspensor and endosperm cells destined to die during late seed development in quinoa (*Chenopodium quinoa*) 1253

---

---

Salas-Leiva, D. E., Meerow, A. W., Calonje, M., Griffith, M. P., Francisco-Ortega, J., Nakamura, K., Stevenson, D. W., Lewis, C. E. and Namoff, S. Phylogeny of the cycads based on multiple single-copy nuclear genes: congruence of concatenated parsimony, likelihood and species tree inference methods 1263

---

---

Moran, J. A., Gray, L. K., Clarke, C. and Chin, L. Capture mechanism in Palaeotropical pitcher plants (Nepenthaceae) is constrained by climate 1279

---

---

Besnard, G., El Bakkali, A., Haouane, H., Baali-Cherif, D., Moukhli, A. and Khadari, B. Population genetics of Mediterranean and Saharan olives: geographic patterns of differentiation and evidence for early generations of admixture 1293

---

---

Hobbhahn, N., Johnson, S. D., Bytebier, B., Yeung, E. C. and Harder, L. D. The evolution of floral nectaries in *Disa* (Orchidaceae: Disinae): recapitulation or diversifying innovation? 1303

---

Contents continued on inside back cover



Scan to view this journal  
on your mobile device

OXFORD  OPEN

OXFORD  
UNIVERSITY PRESS



Nugroho, W. D., Nakaba, S., Yamagishi, Y., Begum, S., Marsoem, S. N., Ko, J.-H., Jin, H.-O and Funada, R. Gibberellin mediates the development of gelatinous fibres in the tension wood of inclined <i>Acacia mangium</i> seedlings	1321
Nogueira, A., El Ottra, J. H. L., Guimarães, E., Machado, S. R. and Lohmann, L. G. Trichome structure and evolution in Neotropical lianas	1331
Rojas, H. J., Roldán, J. A. and Goldraij, A. NnSR1, a class III non-S-RNase constitutively expressed in styles, is induced in roots and stems under phosphate deficiency in <i>Nicotiana glauca</i>	1351
Rong, J., Xu, S., Meirmans, P. G. and Vrieling, K. Dissimilarity of contemporary and historical gene flow in a wild carrot ( <i>Daucus carota</i> ) metapopulation under contrasting levels of human disturbance: implications for risk assessment and management of transgene introgression	1361
Castillo, M.-C., Forment, J., Gadea, J., Carrasco, J. L., Juárez, J., Navarro, L. and Ancillo, G. Identification of transcription factors potentially involved in the juvenile to adult phase transition in <i>Citrus</i>	1371
Song, W., Sun, H., Li, J., Gong, X., Huang, S., Zhu, X., Zhang, Y. and Xu, G. Auxin distribution is differentially affected by nitrate in roots of two rice cultivars differing in responsiveness to nitrogen	1383
Della Rovere, F., Fattorini, L., D'Angeli, S., Velocchia, A., Falasca, G. and Altamura, M. M. Auxin and cytokinin control formation of the quiescent centre in the adventitious root apex of <i>Arabidopsis</i>	1395
Pouget, M., Youssef, S., Migliore, J., Juin, M., Médail, F. and Baumel, A. Phylogeography sheds light on the central-marginal hypothesis in a Mediterranean narrow endemic plant	1409
Van Couwenberghe, R., Gégout, J.-C., Lacombe, E. and Collet, C. Light and competition gradients fail to explain the coexistence of shade-tolerant <i>Fagus sylvatica</i> and shade-intermediate <i>Quercus petraea</i> seedlings	1421
Barigah, T. S., Charrier, O., Douris, M., Bonhomme, M., Herbette, S., Améglio, T., Fichot, R., Brignolas, F. and Cochard, H. Water stress-induced xylem hydraulic failure is a causal factor of tree mortality in beech and poplar	1431
Creissen, H. E., Jorgensen, T. H. and Brown, J. K. M. Stabilization of yield in plant genotype mixtures through compensation rather than complementation	1439
Wang, X., Pearse, S. J. and Lambers, H. Cluster-root formation and carboxylate release in three <i>Lupinus</i> species as dependent on phosphorus supply, internal phosphorus concentration and relative growth rate	1449
Alonso, C., Navarro-Fernández, C. M., Arceo-Gómez, G., Meindl, G. A., Parra-Tabla, V. and Ashman, T.-L. Among-species differences in pollen quality and quantity limitation: implications for endemics in biodiverse hotspots	1461

For more information about *Annals of Botany* please visit our website at [www.aob.oxfordjournals.org](http://www.aob.oxfordjournals.org)

#### Disclaimer

Statements of fact and opinion in the articles in *Annals of Botany* are those of the respective authors and contributors and not of *Annals of Botany* Company or Oxford University Press. Neither Oxford University Press nor *Annals of Botany* Company make any representation, express or implied, in respect of the accuracy of the material in this journal and cannot accept any legal responsibility or liability for any errors or omissions that may be made. The reader should make his/her own evaluation as to the appropriateness or otherwise of any experimental technique described.