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Title page

- ☐ Is your title concise and informative?
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- ☐ Does the Author for correspondence information include a telephone contact and email address?
- ☐ Have you listed the total number of words for each section and the number of figures/tables/supporting information?

(See Appendix A1 for example title page.)

Summary and key words

- ☐ Is the Summary fewer than 200 words? (Note that a Summary is not required for Forum articles.)
- ☐ Is the Summary in four bullet points describing (1) the research conducted, including the rationale, (2) methods, (3) key results and (4) the main conclusion, including key points of discussion?
- ☐ Does the Summary contain the species under investigation (if appropriate), including the full Latin binomial and are abbreviations defined?
- ☐ Have you included 5–8 key words (or very short phrases) in alphabetical order, to aid online searching?
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Main text

- ☐ Is the main text arranged under the following headings (for regular research articles: Introduction, Materials and Methods, Results, Discussion, Acknowledgements, References)?
- ☐ Have you included line and page numbers?
- ☐ Is the text in a consistent font, e.g. Times New Roman 12 pt, and 1.5 spaced?
- ☐ Has the full Latin binomial and authority for the species under investigation been included in the Materials and Methods section, e.g. barley (*Hordeum vulgare* L.)?
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- ☐ Have the abbreviations been defined in full at first mention in the Summary, main text and in each table and figure legend?
- ☐ Has each figure, table and supporting information item been mentioned in the text?

(see Appendix A2 for abbreviation style.)

References

- ☐ Are the citations in the text arranged by date order and alphabetically when of the same date? Where different references would appear identical when cited in this manner, have you used letters after the date in the citations and reference list (e.g. Smith *et al*., 2010a,b)?
- ☐ Is the reference list ordered alphabetically? Put the older paper first where two or more papers have the same authors.
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- ☐ Have you checked the appearance and accuracy of the reference list? If you have used reference management software such as EndNote, please be aware that this can alter the formatting of individual references.
- ☐ Are protein and gene names in article titles formatted correctly (italic or upright letters, and uppercase/lowercase letters as appropriate)?

- ☐ Are genus and species names in italics?
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(See Appendix A3 for citation style.)

Figures

- ☐ Are the figures of a sufficient quality for publication? Wiley-Blackwell recommend using 300 dpi TIFF format for photographic images and 600 dpi EPS or PDF for line-art. If you are in doubt about whether an image's resolution is high enough, try zooming to 400% in the pdf proof and checking whether it still looks sharp.
- ☐ Does the figure contain error bars? Does the legend specify whether these represent SE or SD and whether these are one or two standard errors or confidence intervals?
- ☐ Does the figure contain a scale bar? Is the length given in the legend?
- ☐ Are axis labels included? Are the units included in brackets after the axis label (to fit journal style)? Are the units consistent with those in the legend and main text?
- ☐ Does the first sentence of the legend adequately summarise the figure, including the species under investigation (with full binomial included)? Are all abbreviations defined fully? Figures and their legends should be understandable when viewed in isolation from the rest of the text.
- ☐ Do any of the figures require permission to reproduce? If so, please upload a copy of the permission as an additional file when submitting the article.
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(See Appendix A4 for example figure styles.)

Tables

- ☐ Tables should contain a concise (single sentence) heading including the species under investigation (with the full binomial included).
- ☐ Is the table fully understandable through the column headings or, if these are insufficient, through a tablenote at the foot of the table? (Note that all abbreviations should be defined in the tablenote at the foot of the table.)
- ☐ Does the table contain references? If so, these should be presented in the following style: West *et al.* (2005); Adams *et al.* (2007).
- ☐ Has each table been mentioned in the main text?

(See Appendix A5 for example table styles.)

Supporting Information

- ☐ Have you named the supporting information according to journal style? *New Phytologist* has the following categories of supporting information: Figures, Tables, Methods, Notes and Videos.
- ☐ Are all items of supporting information specifically referred to in the text? (They should be mentioned in the same way as a table or figure e.g. (Supporting Information Fig. S1, Notes S1) etc.)
- ☐ Is a brief, one-sentence legend to each item of supporting information included at the end of the article, following the references?
- ☐ Are full legends to the supporting information included in the Supporting Information files, beneath the relevant table or figure?
- ☐ Are you preparing many separate supporting files? In order to allow ease of reading and downloading, Supporting Information should be consolidated in as few files as possible and must be in final form, ready for viewing. Where possible provide a **single file containing all the supporting information**. Files should be as small as possible, and in appropriate formats, to allow rapid download.

  (See Appendix A6 for example Supporting Information brief legends at the end of the main text.)

Appendices A1–A6

Appendix A1 Example *New Phytologist* title page

Enzymatic activities and stable isotope patterns of ectomycorrhizal fungi in relation to phylogeny and exploration types in an afrotropical rain forest

Leho Tedersoo[1,2]*, Triin Naadel[2]*, Mohammad Bahram[2], Karin Pritsch[3], Franz Buegger[3], Miguel Leal[4], Urmas Kõljalg[1] and Kadri Põldmaa[1]

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Total word count (excluding summary, references and legends):	5845	No. of figures:	6 (Figs 3–6 in colour)
Summary:	195	No. of Tables:	0
Introduction:	644	No of Supporting Information files:	4 (Fig. S1; Table S1–S3)
Materials and Methods:	2066		
Results:	1401		
Discussion:	1630		
Acknowledgements:	104		

Appendix A2 Standard *New Phytologist* abbreviations

Abbreviation	**Definition**
A	absorbance
C_3	plant with C_3 metabolism
C_4	plant with C_4 metabolism
Chl	chlorophyll
Chl*a*, Chl*b*	chlorophyll a and chlorophyll b
cv	cultivar
d	day or days
DW	dry weight
Eqn (Eqns)	equation (equations)
FW	fresh weight
Fig. (Figs)	figure (figures)
g	acceleration due to gravity (not rpm)
GA, GA1, GA3	gibberellin, gibberellin A1, gibberellic acid
h	hour or hours
l	litre (not L)
Log_e	natural logarithm (not Ln)
min	minute or minutes
ns	not significant
P	probability
Pr/Pfr	red/far-red light-absorbing form of phytochrome
Pi	inorganic orthophosphate
s	second or seconds
sp. (spp.)	species
ssp.	Subspecies
var	variety
wk	week or weeks
yr	year or years

Abbreviations that **do not** need defining include: metabolites ATP, NADP and OAA; buffers such as Hepes and Mes; growth regulators such as ABA and IAA; statistical terms such as SD, SE, ANOVA, *F*, R^2 and *t*.

Preferred text style

c. (when followed by a number)	rather than about, around, approximately, roughly
glasshouse, or controlled growth chamber	not greenhouse
before	not prior to
ratios C : N	Not C/N
single quotes (‘)	not double quotes (“)
Units: use appropriate index e.g., m s^{-1} note placing of index, e.g., g g^{-1} DW μmol l (litre)	 not m/s not g/g DW or g g DW^{-1} not μE not L
24 h clock 07:00 h, 21:30 h	not 7.00 am, 9.30 pm
Numbers: Spell out numbers up to and including nine	 not, 2 trees, 7 species

except when used with units (e.g. two trees, seven species, but 3 mg, 5 mm^3)	
Numbered lists: avoid numbered lists unless the items are sequential.	
Specify position in text e.g. 'see the Materials and Methods section'	not 'see above', 'see below'
Photoperiod, 16 h : 8 h, light : dark	not 16/8 h light/dark
Probability list style: *, *P* < 0.05; **, *P* < 0.01; ***, *P* < 0.001; ns, not significant.	

Appendix A3 *New Phytologist* example reference styles

(Regular research articles)

Amselem J, Cuomo CA, van Kan JAL, Viaud M, Benito EP, Couloux A, Coutinho PM, de Vries RP, Dyer PS, Fillinger S *et al.* 2011. Genomic analysis of the necrotrophic fungal pathogens *Sclerotinia sclerotiorum* and *Botrytis cinerea*. *PLoS Genetics* **7***:* e1002230.

IPCC. 2007. Solomon S, Qin D, Manning M, Chen Z, Marquis M, Averyt KB, Tignor M, Miller HL, eds. *Climate change 2007: the physical science basis. Contribution of Working Group I to the fourth assessment report of the Intergovernmental Panel on Climate Change.* Cambridge, UK & New York, NY, USA: Cambridge University Press.

Smith S, Rausher MD. 2011. Gene loss and parallel evolution contribute to species difference in flower color. *Molecular Biology and Evolution* **28***:* 2799–2810.

Strader LC, Chen GL, Bartel B. 2010. Ethylene directs auxin to control root cell expansion. *Plant Journal* **64**: 874–884.

(Book)

Smith SE, Read DJ. 2008. *Mycorrhizal symbiosis*. Cambridge, UK: Academic Press.

(Book chapter)

Eckert CG, Samis KE, Dart S. 2006. Reproductive assurance and the evolution of uniparental reproduction in flowering plants. In: Harder LD, Barrett SCH, eds. *The ecology and evolution of flowering*. Oxford, UK: Oxford University Press, 183–203.

(Thesis)

Darbah JNT. 2007. *Impacts of elevated atmospheric CO_2 and/or O_3 on carbon gain and reproductive capacity in northern forest ecosystems.* PhD thesis, Michigan Technological University, Houghton, MI, USA.

(Web document)

Webb C, Ackerly D, Kembel S. 2009. *Phylocom. Software for the analysis of phylogenetic community structure and character evolution.* [WWW document] URL http://phylodiversity.net/phylocom/. [accessed 1 September 2011].

('In press' article)

Schowalter TD. 2012. Insect herbivore effects on forest ecosystem services. *Journal of Sustainable Forestry*, in press.

References that are available online pending their appearance in a scheduled print (or online) issue (for *New Phytologist* papers this means availability in *Early View*) to be listed as:

Schulze S, Kay S, Büttner D, Egler M, Eschen-Lippold L, Hause, G. Krüger A, Lee J, Müller O, Scheel D *et al*. 2012. Analysis of new type III effectors from *Xanthomonas* uncovers XopB and XopS as suppressors of plant immunity. *New Phytologist*. doi: 10.1111/j.1469-8137.2012.04210.x

Appendix A4 *New Phytologist* example figure styles

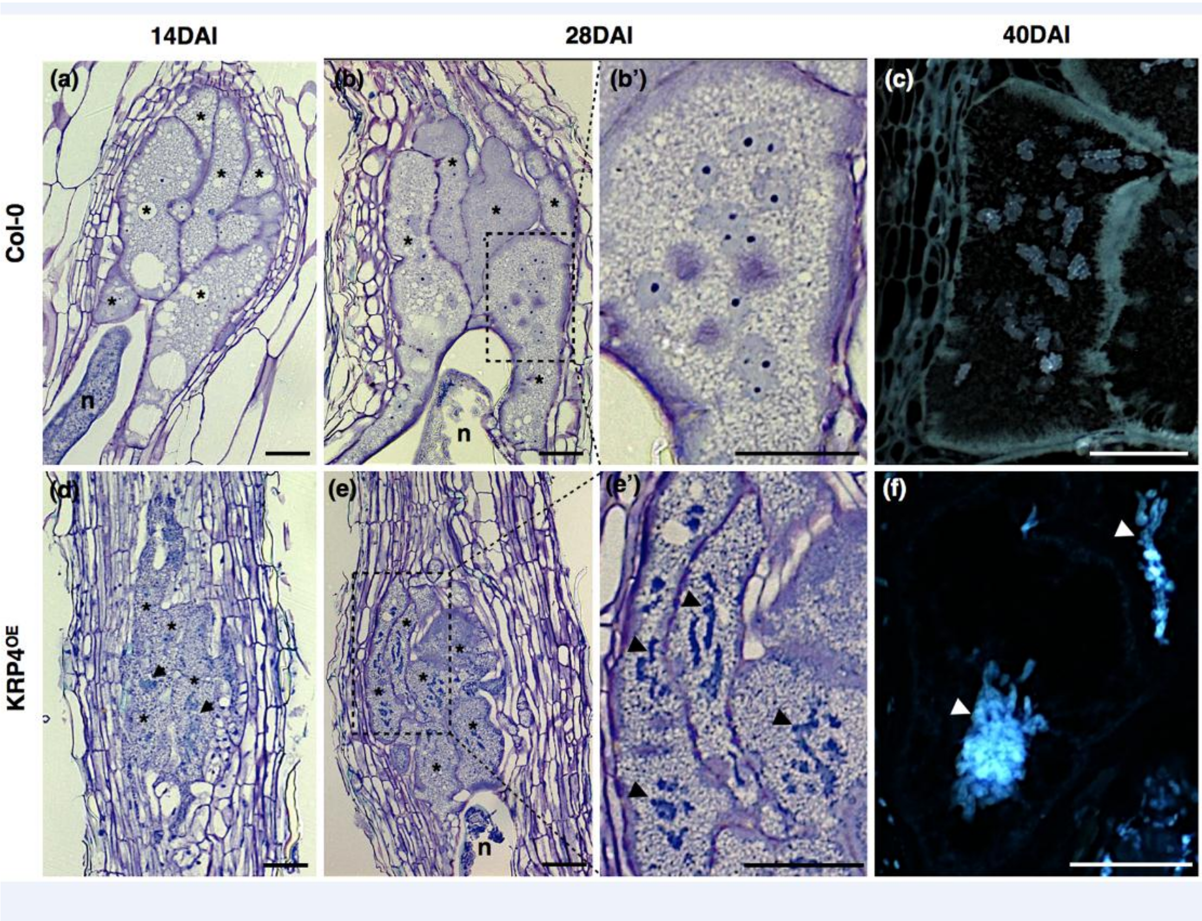

Fig. 2 Morphological analysis of galls overexpressing Kip-related protein 4 (*KRP4*) and wild type in Arabidopsis roots infected by *Meloidogyne incognita*. Bright-field micrographs are shown of sections stained with toluidine blue (a, b, d, e) and DAPI (c, f) at three time-points after nematode infection (14, 28 and 40 d after inoculation (DAI)). (a–c) Sections of galls in roots of wild-type *A. thaliana* Col-0 showing multiple giant cell nuclei. (d–f) Sections of galls in roots of the *KRP4*^{OE} line. Arrows indicate the interconnected nuclei within the giant cells. Asterisk, giant cell; n, nematode. Bars, 50 μm.

* * *

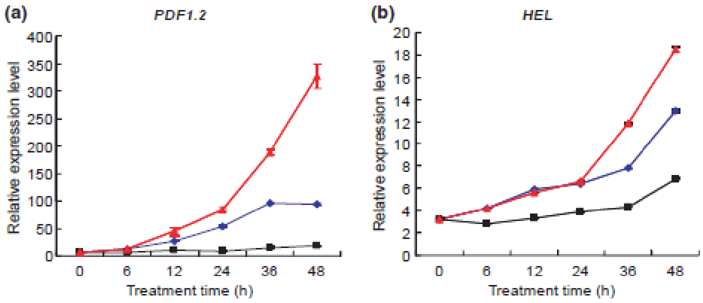

Fig. 6 Auxin enhances JA-induced expression of defense-related genes in *Arabidopsis thaliana*. Twelve-day-old seedlings were respectively treated with 50 μM MeJA (blue lines), 25 μM IAA (black lines), or 50 μM MeJA and 25 μM IAA together (red lines) for different times. Samples were taken at the indicated time to determine the expression level of (a) *PDF1.2* (PLANT DEFENSIN 1.2) and (b) *HEL* (HEVEIN-LIKE) using qRT-PCR. The transcript levels of *PDF1.2* and *HEL* were normalized to the *ACTIN7* expression, and error bars represent the SD of triplicate reactions. The experiment was repeated three times with similar results.

* * *

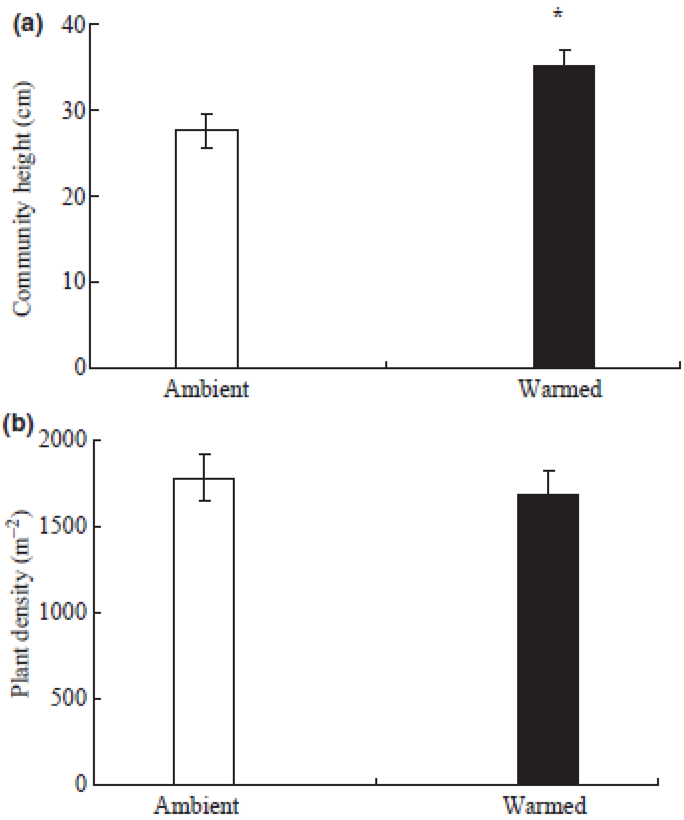

Fig. 3 Mean community height (a) and total plant density (b) in warmed open-top chambers (OTCs; closed column) and ambient OTCs (open column). The error bars denote 1SE. *, $P < 0.05$.

Appendix A5 *New Phytologist* example table styles

Table 2 Summary statistics for the best linear mixed model fitted to the amount of ergosterol detected in moss tissues with the fixed effects of tissue type, host, month, and the interactions between tissue and host, and host and month

	numDF	denDF	*F*-value	*P*-value
(Intercept)	1	243	254.9653	**<.0001**
Tissue	1	243	1139.0169	**<.0001**
Host	2	243	436.1965	**<.0001**
Month	4	243	1.2971	0.2718
Tissue : host	2	243	5.7311	**0.0037**
Host : month	8	243	3.0691	**0.0026**

numDF, numerator degrees of freedom; denDF, denominator degrees of freedom.

Forest type and sampling plot were included as random factors. An additional contribution of difference in variance was included at the combined levels of host and forest. The standard deviation of random components were as follows: plot : forest = 80.3113; fForest = 0.02576.

Statistically significant values are indicated in bold text.

* * *

Table 2 Mean percentage water content in lichen thalli above silica-gel and various saturated salt solutions after 7 d under 200 µmol m^{-2} s^{-1}

%RH	Silica or salt solution	Ψ_{air}, MPa	*Lobaria hallii*	*Lobaria pulmonaria*	*Lobaria retigera*	*Lobaria scrobiculata*	*Platismatia glauca*	*Pseudocy-phellaria anomala*
0	silica-gel	-∞	4.2±0.6	3.8±0.6	5.1±1.2	3.8±0.7	6.1±0.5	4.2±0.6
35	$MgCl_2$	-148	8.5±0.1	8.6±1.1	8.1±0.1	7.8±0.2	9.9±0.2	9.5±1.2
55	$Mg(NO_3)_2$	-80	11.4±0.4	10.8±0.2	12.1±0.7	10.8±0.1	12.3±0.4	11.4±0.4
75	NaCl	-38	15.8±0.1	14.3±0.2	15.4±0.1	14.4±0.6	16.3±1.3	13.7±0.6

RH, relative humidity. Values are mean ± 1 SE; *n* = 5.

* * *

Table 1 Evidence for the ability of plants to sense different parameters associated with temperature change

Species/ response	**Proposed parameter sensed**	**Temp. change (°C)**	**Comments**	**Reference(s)**
Arabidopsis: $[Ca^{2+}]_{cyt}$ elevation in roots	Absolute temperature	18–4	Magnitude of $[Ca^{2+}]_{cyt}$ elevation was dependent on the absolute temperature reached, but to a lesser extent than on cooling rate.	Plieth *et al.* (1999)
Arabidopsis: CBF1-3 expression	Absolute temperature	20–10, 204, 20 to -5	Transcript levels were dependent on final temperature and unrelated to rate of cooling.	Zarka *et al.* (2003)
H2A.Z remodelling	Absolute temperature	17–27	Plants transferred from ambient growth temperature to high ambient temperature for 2 h showed reduced histone H2A.Z occupancy at the heat-responsive HSP70 promoter and accompanied by altered gene expression. No evidence that this occurs under cold conditions.	Kumar & Wigge (2010)
Alfalfa cultured cells membrane rigidification	Absolute temperature	25–4	Cooling at 1.2°C min^{-1} elicited membrane rigidification. Cannot eliminate the possibility that this may have been a response to change in temperature.	Orvar *et al.* (2000)
Wheat: CBF transcript expression (CBF1Vb-D2)	Absolute temperature	15–4	Transcript levels rose in response to rapid cold shock followed by 2 d cold but also responded to gradual cooling.	Winfield *et al.* (2009, 2010)
Wheat: CBF transcript expression (CBFIIId-12)	Absolute temperature and duration	16–2	Gradual cooling over several weeks was accompanied by a reduction in light level and daylength, to mimic cold acclimation. These parameters may have contributed to temperature sensing. No response to rapid cold shock.	Winfield *et al.* (2009, 2010)
Various plant species: Vernalisation	Absolute temperature and duration	Varies; reductions from ambient down to 2–4 or 8–17	Allows transition to flowering in vernalisation-requiring plants. Absolute temperature and required duration (days, weeks or months) vary between species and ecotypes. Reviewed in this reference.	Sung & Amasino (2005)
Arabidopsis: $[Ca^{2+}]_{cyt}$ elevation in roots	Rate of cooling	18–4	Magnitude of $[Ca^{2+}]_{cyt}$ elevation was dependent on cooling rate, with rates as low as 0.01°C min^{-1} sensed.	Plieth *et al.* (1999)
Cucumber: membrane depolarisation in seedlings	Rate of cooling	23–18	Magnitude of depolarisation was dependent on cooling rate. Fast cooling (20°C min^{-1}) cooling elicited a larger response than slow cooling (0.4°C min^{-1}).	Minorsky & Spanswick (1989)
Arabidopsis seedlings $[Ca^{2+}]_{cyt}$ elevation	'Memory' of previous cold experience	21–0	Previous exposure to cold (3 h @ 4°C d^{-1}, 3 d) caused altered response to cold. We suggest the cytoskeleton may be involved in modulating these changes in signature.	Knight *et al.* (1996)

The table show examples of plant responses to low temperature and lists the likely parameter sensed in each case and the evidence for this. 'Temperature change' refers to the initial and final temperature experienced by plants. One example of ambient temperature sensing is included for comparison.

Appendix A6 *New Phytologist* example Supporting Information brief legends (at the end of the main text). Ideally, the separate items of supporting information should be consolidated into a single file.

Supporting Information

Additional supporting information may be found in the online version of this article.

Fig. S1 Relationship of median leaf lifespan of shade-grown seedlings with leaf lifespan and toughness of gap grown seedlings.

Fig. S2 Alternative models to the path models shown in Fig. 4 with adequate fit.

Table S1 Species means for additional leaf traits measured with gap-grown seedlings

Table S2 Correlations between cell wall fiber components and density-corrected toughness

Table S3 Leaf traits measured with seedlings grown in understory shade gardens

Notes S1 Additional methodological details on regeneration guild classification and trait measurements.

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