***New Phytologist* Supporting Information**

Article title: Nutrient-rich plants emit a less intense blend of volatile isoprenoids
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The following Supporting Information is available for this article:

Table S1: Description of the spread sheet containing the data used in this paper fernandez_martinez_et_al_bvocs.xlsx).

isp.mass: Isoprene, emission rate (µg g^{-1} h^{-1}).

mtp.mass: Monoterpenes, emission rate (µg g^{-1} h^{-1}).

LMA: Leaf mass per area (g cm^{-2})

Foliar N: Foliar N concentration (% dry weight)

Foliar P: Foliar P concentration (% dry weight)

Foliar N:P: Foliar N:P ratio (unitless)

MAT: Mean annual temperature (Celsius degrees)

MAP: Mean annual precipitation (mm y^{-1})

PC1: Factor scores for axis 1 in the phylogenetic PCA (**Figure 1**)

PC2: Factor scores for axis 2 in the phylogenetic PCA (**Figure 1**)

Table S2 Literature used to extract data for isoprenoid emissions. Numbers match with supplementary references at the end of supplementary material.

Species	References	Species	References
Acacia karroo	1	*Eucalyptus grandis*	28,31
Acacia nigrescens	2,3	*Eucalyptus viminalis*	31
Acacia nilotica	1,3	*Fagus sylvatica*	32,33
Acacia tortilis	2,3	*Ficus fistulosa*	15,25
Adenostoma fasciculatum	4-6	*Ficus microcarpa*	15,19,21,25
Amelanchier alnifolia	7	*Ficus racemosa*	15,25
Arbutus unedo	8-12	*Ginkgo biloba*	7,34-36
Artemisia tridentata	7	*Grevillea robusta*	21,37,30
Atriplex canescens	7,13,14	*Helichrysum stoechas*	8,9,11,12
Betula ermanii	15	*Juglans regia*	4,6,35,38
Betula fruticosa	15	*Juniperus oxycedrus*	8,9,11,12
Betula nana	16	*Juniperus phoenicea*	8,9,11,12
Betula pendula	17,18	*Kalmia latifolia*	7
Betula platyphylla	15	*Larix laricina*	23
Betula pubescens	17	*Lavandula stoechas*	8,9,10,12
Bischofia javanica	19	*Ledum palustre*	15,39
Brachypodium retusum	8,9,12	*Leucaena leucocephala*	19,21
Brachystegia spiciformis	1	*Liquidambar styraciflua*	27,34,40,41,42
Burkea africana	1,2	*Maackia amurensis*	15
Buxus sempervirens	8,9,12	*Mallotus paniculatus*	15
Carpinus betulus	20	*Mangifera indica*	21,25,30,43
Castanea dentata	7	*Medicago sativa*	4,6,27,38
Casuarina equisetifolia	21	*Myrtus communis*	8,9,11,12,26,
Ceratonia siliqua	22	*Nerium oleander*	8,9,12
Chamaedaphne calyculata	23	*Olea europaea*	4,6,8,9,12,22,44,38,
Cistus albidus	8,9,11,12	*Oryza sativa*	6
Combretum molle	2	*Ostrya virginiana*	23
Cyrilla racemiflora	24	*Phillyrea angustifolia*	8,9,11,12,
Cytisus scoparius	8	*Picea abies*	23,45-49
Daucus carota	4,6	*Picea glauca*	23,49
Dimocarpus longan	25	*Picea mariana*	23,49,50
Diospyros texana	14	*Picea sitchensis*	27,51,53,55
Dorycnium pentaphyllum	8,9,12	*Pinus halepensis*	8,9,10,12,34,56,57,44,58,59
Erica arborea	8,9,11,12,26	*Pinus koraiensis*	15
Erica multiflora	8,9,11,12	*Pinus pinea*	8,9,10,11,12,34,60-64
Eucalyptus globulus	27-30	*Pinus sylvestris*	39,46-48,65-67,

Table S1: Continuation.

Species	References	Species	References
Pinus tabuliformis	15	*Quercus suber*	37,78,79
Pistacia lentiscus	8,9,12,26	*Rhamnus lycioides*	8,9,12
Platycladus orientalis	15	*Robinia pseudoacacia*	15,27,40
Populus balsamifera	68	*Rosmarinus officinalis*	8,10,26,37,44
Populus deltoides	27,40,69	*Salix phylicifolia*	16,18
Populus nigra	8,9,12,69	*Salix rosmarinifolia*	15
Populus tremula	18,39,70	*Salix viminalis*	15
Populus tremuloides	23,27,71,72	*Salvia mellifera*	5,27
Prunus avium	4,6,38	*Schima superba*	15
Pseudotsuga menziesii	68,73-76	*Schima wallichii*	15,19
Psidium guajava	21,30	*Schizachyrium scoparium*	14
Quercus cerris	8,9,11,12,77-79	*Syzygium jambos*	15
Quercus chrysolepis	40,77	*Taxodium distichum*	15,36
Quercus coccifera	8,9,12,58,80,81	*Terminalia bellirica*	15,30
Quercus ilex	8,9,11,12,22,56-58,	*Thymus vulgaris*	8,9,10,12
	60-62,64,82-89	*Tilia americana*	7,23
Quercus lobata	4,6,38,40	*Trema orientalis*	3,15
Quercus mongolica	15,90	*Triticum aestivum*	6,27
Quercus petraea	20,79	*Ulex europaeus*	92,93
Quercus pubescens	8,9,12,79,84,85	*Ulex parviflorus*	8,12
Quercus robur	39,70,91	*Vaccinium uliginosum*	15,68

Table S3: Loadings of the phylogenetic PCA shown in Figure 1. The coefficients whose absolute value was higher than 0.6 are highlighted in bold. Estimated lambda was 0.55.

	PC1	PC2
LMA	**0.6016**	0.3285
MAP	-0.1094	0.0053
MAT	0.3601	-0.2316
Foliar N	**-0.6435**	-0.0915
Foliar P	**-0.6242**	**0.6995**
Foliar N:P	0.3414	**-0.8691**
Woody	0.0237	0.1272
Deciduous	**-0.8082**	-0.3180
Evergreen	**0.8538**	0.3523
Variance explained (%)	31.2	18.4

Table S4: Average AICc (second-order Akaike information criterion) values for the Brownian motion (BM1, BMS) and generalised Ornstein-Uhlenbeck-based Hansen (OU1, OUM, OUMV) models for foliar nitrogen concentration (N), foliar phosphorus concentration (P), foliar N:P ratio, leaf mass per area (LMA), mean annual temperature (MAT), and mean annual precipitation (MAP). The difference between each of the model's AICc and the model with the lowest AICc is shown under the heading ΔAICc. Average AICc values were calculated using the subset of models in which none of them presented negative eigenvalues (sound models).

	BM1	**BMS**	**OU1**	**OUM**	**OUMV**
AICc					
N	205.26	123.46	31.45	16.36	0.00
P	69.78	26.00	-114.70	-114.14	-112.77
NP	0.00	-76.39	-130.47	-131.84	-195.55
LMA	0.00	-144.78	-206.81	-207.22	-225.65
MAT	0.00	-132.08	-220.73	-221.06	-215.40
MAP	120.82	77.47	2.68	5.15	1.23
ΔAICc					
N	205.26	123.46	31.45	16.36	0.00
P	184.48	140.70	0.00	0.56	1.93
NP	195.55	119.16	65.08	63.70	0.00
LMA	225.65	80.87	18.85	18.43	0.00
MAT	221.06	88.97	0.32	0.00	5.66
MAP	119.59	76.24	1.45	3.92	0.00

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