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Table S1. Plant species examined.

Plant Group	Species	No of Samples	Sites
Trees (seedlings)	<i>Acer platanoides</i> L. (seedlings)	9	1, 4, 6, 8
	<i>Picea abies</i> L. (seedlings)	4	4, 5, 6, 8
Grasses	<i>Holcus lanatus</i> L.	26	1, 2, 5, 6, 7, 8
	<i>Festuca rubra</i> L.	29	1, 2, 3, 5, 7, 8
	<i>Agrostis capillaris</i> L.	29	1, 2, 5, 6, 7, 8
	<i>Deschampsia flexuosa</i> L.	9	1, 5, 6, 8
	<i>Calamagrostis epigejos</i> L.	11	1, 2, 3
	<i>Calamagrostis arundinacea</i> L.	4	4
Fabaceae	<i>Lotus corniculatus</i> L.	11	1, 2, 3, 5, 7, 8
	<i>Trifolium pretense</i> L.	4	1, 2, 7
	<i>Silene vulgaris</i> L.	5	1, 7, 8
Other plants	<i>Dryopteris</i> spp. L.	15	1, 4, 5, 6, 8
	<i>Equisetum</i> spp. L.	12	2, 6, 7, 8

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Table S2. Median As concentrations in shoots and roots and median values of transfer factor TF for plant species examined.

Plant Group	Species	Median As Concentrations in Plant Material, mg/kg		Median TF Values
		Shoots	Roots	
Trees (seedlings)	<i>Acer platanoides</i> L. (seedlings)	5.8	48.8	0.11
	<i>Picea abies</i> L. (seedlings)	8.3	38.9	0.37
Grasses	<i>Holcus lanatus</i> L.	8.3	44.5	0.19
	<i>Festuca rubra</i> L.	5.5	45.8	0.15
	<i>Agrostis capillaris</i> L.	5.6	23.5	0.17
	<i>Deschampsia flexuosa</i> L.	7.5	11.3	0.82
	<i>Calamagrostis epigejos</i> L.	26.8	146.8	0.14
	<i>Calamagrostis arundinacea</i> L.	8.9	69.6	0.13
Fabaceae	<i>Lotus corniculatus</i> L.	15.8	10.8	0.17
	<i>Trifolium pretense</i> L.	3.9	35.8	0.15
Other plants	<i>Silene vulgaris</i> L.	9.8	125.8	0.16
	<i>Dryopteris</i> spp. L.	12.8	32.3	0.21
	<i>Equisetum</i> spp. L.	47.5	15.3	0.28

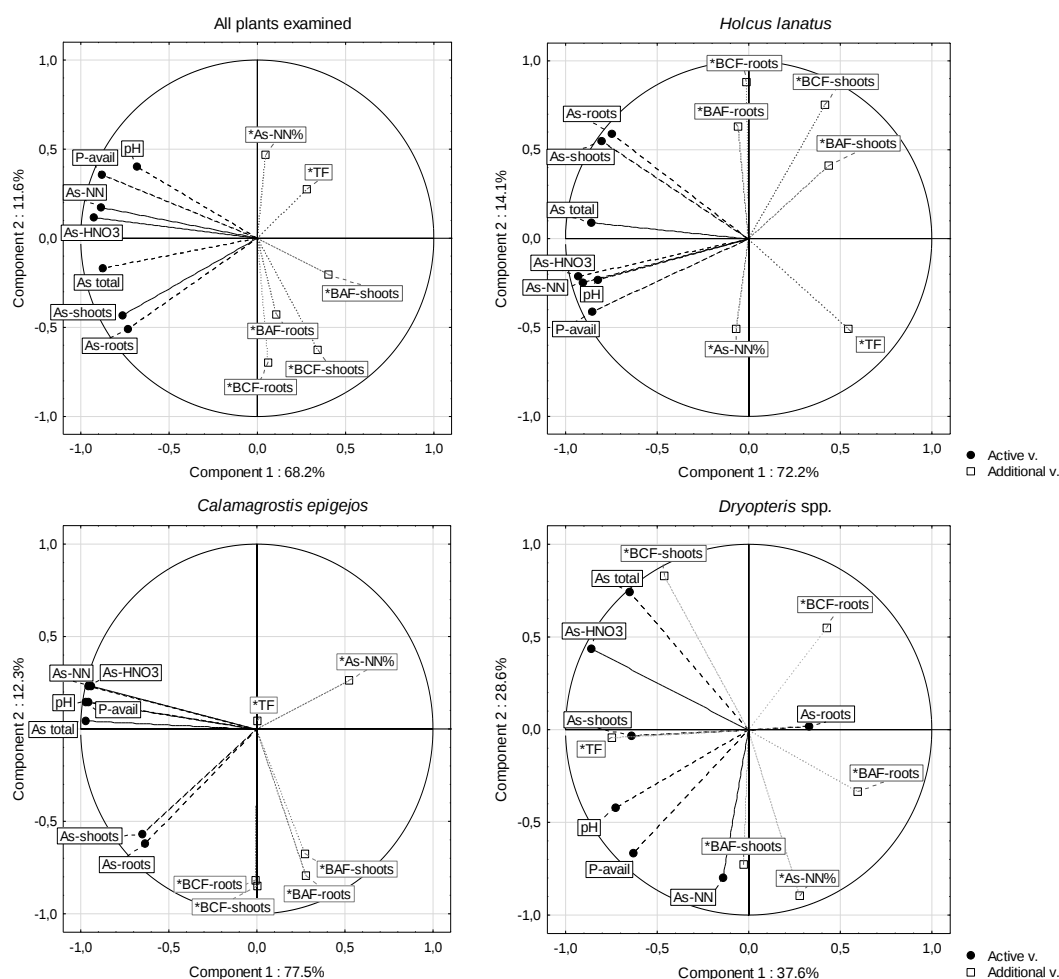


Figure S1. The results of principal component analysis performed for all data and selected plant species separately. The graphs illustrate relationships between the main variables that characterize soil properties and As uptake by plants-as related to principal Components 1 and 2. Active values in PCA analysis have been indicated with black dots. Plant species separately selected for PCA analysis: *Calamagrostis epigejos*, *Holcus lanatus*, and *Dryopteris* spp. Explanations: As-HNO₃: soil concentrations of 0.43M HNO₃-extractable As, As-NN: soil concentrations of 1M NH₄NO₃-extractable As, As-NN%: shares of 1M NH₄NO₃-extractable As in total As (expressed in %), P-avail-extractable P in soil, BCF-shoots and BCF-roots: BCF factors related to 1M NH₄NO₃-extractable As.