

Raw data from the study: Character expression, reproductive barriers and origin of the rare fern hybrid *Asplenium* × *aran-tohanum* (Aspleniaceae)

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Abstract

In this work, we provide the raw data supporting the results of the study about character expression, reproductive barriers and origin of the rare fern hybrid *Asplenium* × *aran-tohanum* (Aspleniaceae).

The data contributed refers to the variables used in the statistical analyses. Basic methodology is also given.

Keywords: *Asplenium* · Ferns · Hybrid · Iberian Peninsula · Phylogenetic analyses · Reproductive isolation · Speciation

Methodology

We studied three taxa: the hybrid *Asplenium* × *aran-tohanum* and the parentals *Asplenium trichomanes* subsp. *quadrialeans* and *Asplenium billotii*.

The hybrid is known only from three individuals of three Spanish locations (Ávila, Coruña and Madrid). We were able to study these three individuals along with the parentals collected in the immediate surroundings in each location.

For each of the available individuals we measured several macro and microcharacters with the aid of dissecting and light microscopes. The following microcharacters were analyzed statistically: guard cell length, rhizome scales length, sclerosed rhizome scale, number of annulus cells, exospore length and spore abortion percentage. ‘Sclerosed rhizome scale’ was defined as the portion (%) of the length of rhizome scales with sclerosed middle cells. Spores were considered aborted when they lacked a protoplast or were collapsed.

For each taxon, microcharacters were determined in 2–3 individuals, on each of which 30 measurements were made when possible. The length of the guard cell was counted in 43 stomata per individual. Spore abortion percentage was counted in four random samples of 100 spores per individual.

DATA

TABLE 1. BIOMETRICAL MEASUREMENTS OF MORPHOLOGICAL VARIABLES. 2 individuals/taxon; 30 measurements/individual

Taxon	Individual	Sample	Rizome scale length (mm)	Sclerosed rhizome scale (%)	No. of annulus cells	Exospore length (μm)
<i>A. billotii</i>	1	1	11.6	0	20	35,0
<i>A. billotii</i>	1	2	10.4	0	19	25,0
<i>A. billotii</i>	1	3	9.6	0	21	25,0
<i>A. billotii</i>	1	4	12.4	0	19	27,5
<i>A. billotii</i>	1	5	7.6	0	24	35,0
<i>A. billotii</i>	1	6	9.2	0	20	37,5
<i>A. billotii</i>	1	7	12.0	0	27	40,0
<i>A. billotii</i>	1	8	6.0	0	21	42,5
<i>A. billotii</i>	1	9	10.0	0	18	32,5
<i>A. billotii</i>	1	10	7.2	0	23	37,5
<i>A. billotii</i>	1	11	12.8	0	26	30,0
<i>A. billotii</i>	1	12	10.0	0	20	35,0
<i>A. billotii</i>	1	14	11.2	0	25	37,5
<i>A. billotii</i>	1	14	10.8	0	20	37,5
<i>A. billotii</i>	1	15	12.4	0	24	40,0
<i>A. billotii</i>	1	16	10.8	0	20	37,5
<i>A. billotii</i>	1	17	6.0	0	19	35,0
<i>A. billotii</i>	1	18	6.8	0	21	40,0
<i>A. billotii</i>	1	19	10.0	0	20	45,0
<i>A. billotii</i>	1	20	10.2	0	22	35,0
<i>A. billotii</i>	1	21	9.6	0	18	40,0
<i>A. billotii</i>	1	22	11.2	0	20	32,5
<i>A. billotii</i>	1	23	11.6	0	24	30,0
<i>A. billotii</i>	1	24	12.4	0	19	40,0
<i>A. billotii</i>	1	25	10.0	0	20	37,5
<i>A. billotii</i>	1	26	7.2	0	20	30,0
<i>A. billotii</i>	1	27	8.4	0	24	37,5
<i>A. billotii</i>	1	28	9.8	0	21	27,5
<i>A. billotii</i>	1	29	7.6	0	25	37,5
<i>A. billotii</i>	1	30	12.0	0	20	17,5
<i>A. billotii</i>	2	1	8.3	0	19	30,0
<i>A. billotii</i>	2	2	6.8	0	19	32,5
<i>A. billotii</i>	2	3	7.2	0	19	32,5
<i>A. billotii</i>	2	4	7.9	0	19	32,5
<i>A. billotii</i>	2	5	7.5	0	18	30,0
<i>A. billotii</i>	2	6	8.5	0	19	30,0
<i>A. billotii</i>	2	7	6.5	0	18	32,5
<i>A. billotii</i>	2	8	7.7	0	19	27,5

Taxon	Individual	Sample	Rizome scale length (mm)	Sclerosed rhizome scale (%)	No. of annulus cells	Exospore length (μm)
<i>A. billotii</i>	2	9	6.3	0	19	35,0
<i>A. billotii</i>	2	10	9.2	0	18	35,0
<i>A. billotii</i>	2	11	12.4	0	18	32.5
<i>A. billotii</i>	2	12	8.8	0	20	30,0
<i>A. billotii</i>	2	14	6.8	0	18	32.5
<i>A. billotii</i>	2	14	9.6	0	18	30,0
<i>A. billotii</i>	2	15	11.6	0	18	35,0
<i>A. billotii</i>	2	16	12.8	0	19	30,0
<i>A. billotii</i>	2	17	12.4	0	21	35,0
<i>A. billotii</i>	2	18	10.0	0	19	32.5
<i>A. billotii</i>	2	19	13.2	0	20	27.5
<i>A. billotii</i>	2	20	13.6	0	19	32.5
<i>A. billotii</i>	2	21	9.6	0	20	25,0
<i>A. billotii</i>	2	22	9.2	0	20	22.5
<i>A. billotii</i>	2	23	12.4	0	19	35,0
<i>A. billotii</i>	2	24	8.8	0	22	20,0
<i>A. billotii</i>	2	25	10.8	0	20	35,0
<i>A. billotii</i>	2	26	11.6	0	21	30,0
<i>A. billotii</i>	2	27	8.5	0	19	27.5
<i>A. billotii</i>	2	28	10.0	0	18	30,0
<i>A. billotii</i>	2	29	11.6	0	20	32.5
<i>A. billotii</i>	2	30	7.7	0	19	27.5
<i>A. trichomanes</i>	1	1	5.2	100	16	27.5
<i>A. trichomanes</i>	1	2	7.6	100	18	37.5
<i>A. trichomanes</i>	1	3	4.8	100	20	27.5
<i>A. trichomanes</i>	1	4	5.6	90	18	35,0
<i>A. trichomanes</i>	1	5	8.8	100	17	32.5
<i>A. trichomanes</i>	1	6	6.4	100	20	35,0
<i>A. trichomanes</i>	1	7	4.0	90	20	32.5
<i>A. trichomanes</i>	1	8	6.4	100	21	30,0
<i>A. trichomanes</i>	1	9	4.0	90	18	32.5
<i>A. trichomanes</i>	1	10	6.4	100	18	27.5
<i>A. trichomanes</i>	1	11	4.8	90	17	32.5
<i>A. trichomanes</i>	1	12	6.8	100	23	35,0
<i>A. trichomanes</i>	1	14	5.6	100	19	30,0
<i>A. trichomanes</i>	1	14	6.4	100	18	32.5
<i>A. trichomanes</i>	1	15	4.0	80	21	32.5
<i>A. trichomanes</i>	1	16	6.2	100	19	35,0
<i>A. trichomanes</i>	1	17	5.2	100	19	30,0
<i>A. trichomanes</i>	1	18	7.2	100	18	37.5
<i>A. trichomanes</i>	1	19	5.6	100	20	35,0
<i>A. trichomanes</i>	1	20	6.0	90	19	32.5
<i>A. trichomanes</i>	1	21	6.4	100	18	30,0
<i>A. trichomanes</i>	1	22	5.2	100	18	27.5

Taxon	Individual	Sample	Rizome scale length (mm)	Sclerosed rhizome scale (%)	No. of annulus cells	Exospore length (μm)
<i>A. trichomanes</i>	1	23	5.6	100	21	37.5
<i>A. trichomanes</i>	1	24	7.2	100	15	30,0
<i>A. trichomanes</i>	1	25	5.6	100	18	37.5
<i>A. trichomanes</i>	1	26	4.8	90	16	35,0
<i>A. trichomanes</i>	1	27	7.2	90	18	32.5
<i>A. trichomanes</i>	1	28	7.6	100	19	30,0
<i>A. trichomanes</i>	1	29	8.0	100	18	35,0
<i>A. trichomanes</i>	1	30	5.2	90	19	35,0
<i>A. trichomanes</i>	2	1	4.8	100	24	37.5
<i>A. trichomanes</i>	2	2	4.7	100	18	37.5
<i>A. trichomanes</i>	2	3	5.9	100	20	37.5
<i>A. trichomanes</i>	2	4	4.6	100	19	35,0
<i>A. trichomanes</i>	2	5	4.6	100	19	37.5
<i>A. trichomanes</i>	2	6	4.9	100	18	37.5
<i>A. trichomanes</i>	2	7	3.7	90	22	35,0
<i>A. trichomanes</i>	2	8	5.3	100	21	32.5
<i>A. trichomanes</i>	2	9	4.6	100	20	37.5
<i>A. x aran-tohanum</i>	1	1	8.2	0	19	30,0
<i>A. x aran-tohanum</i>	1	2	10.6	16,5	19	30,0
<i>A. x aran-tohanum</i>	1	3	10.2	15	21	25,0
<i>A. x aran-tohanum</i>	1	4	7.8	0	21	35,0
<i>A. x aran-tohanum</i>	1	5	10.0	0	18	30,0
<i>A. x aran-tohanum</i>	1	6	10.6	30	18	35,0
<i>A. x aran-tohanum</i>	1	7	9.2	0	19	32.5
<i>A. x aran-tohanum</i>	1	8	10.2	0	21	40,0
<i>A. x aran-tohanum</i>	1	9	10.0	7	18	22.5
<i>A. x aran-tohanum</i>	1	10	10.4	20	19	30,0
<i>A. x aran-tohanum</i>	1	11	9.6	0	20	30,0
<i>A. x aran-tohanum</i>	1	12	11.0	0	19	30,0
<i>A. x aran-tohanum</i>	1	14	9.4	0	22	30,0
<i>A. x aran-tohanum</i>	1	14	6.0	0	23	35,0
<i>A. x aran-tohanum</i>	1	15	6.6	0	21	32.5
<i>A. x aran-tohanum</i>	1	16	10.0	0	18	22.5
<i>A. x aran-tohanum</i>	1	17	11.2	20	19	27.5
<i>A. x aran-tohanum</i>	1	18	8.0	27,5	22	37.5
<i>A. x aran-tohanum</i>	2	1	6.8	0	20	42.5
<i>A. x aran-tohanum</i>	2	2	7.5	0	22	30,0
<i>A. x aran-tohanum</i>	2	3	5.1	0	20	30,0
<i>A. x aran-tohanum</i>	2	4	4.8	10	20	35,0
<i>A. x aran-tohanum</i>	2	5	7.6	10	19	45,0
<i>A. x aran-tohanum</i>	2	6	6.7	0	20	25,0
<i>A. x aran-tohanum</i>	2	7	7.1	0	20	37.5
<i>A. x aran-tohanum</i>	2	8	8.7	20	21	32.5
<i>A. x aran-tohanum</i>	2	9	7.1	0	21	35,0

Taxon	Individual	Sample	Rizome scale length (mm)	Sclerosed rhizome scale (%)	No. of annulus cells	Exospore length (μm)
<i>A. x aran-tohanum</i>	2	10	7.4	10	20	37.5
<i>A. x aran-tohanum</i>	2	11	8.0	0	18	25,0
<i>A. x aran-tohanum</i>	2	12	9.0	40	20	30,0
<i>A. x aran-tohanum</i>	2	14	8.4	0	21	30,0
<i>A. x aran-tohanum</i>	2	14	9.4	27	19	25,0
<i>A. x aran-tohanum</i>	2	15	9.6	10	23	20,0
<i>A. x aran-tohanum</i>	2	16	9.2	0	19	30,0
<i>A. x aran-tohanum</i>	2	17	9.0	0	18	25,0
<i>A. x aran-tohanum</i>	2	18	9.2	0	19	30,0
<i>A. x aran-tohanum</i>	2	19	10.0	0	22	40,0
<i>A. x aran-tohanum</i>	2	20	10.0	10	19	27.5
<i>A. x aran-tohanum</i>	2	21	8.8	0	21	22.5
<i>A. x aran-tohanum</i>	2	22	8.2	15	22	32.5
<i>A. x aran-tohanum</i>	2	23	8.2	0	27	35,0
<i>A. x aran-tohanum</i>	2	24	6.8	17	18	40,0
<i>A. x aran-tohanum</i>	2	25	10.0	0	19	35,0
<i>A. x aran-tohanum</i>	2	26	9.0	30	18	27.5
<i>A. x aran-tohanum</i>	2	27	5.2	0	16	25,0
<i>A. x aran-tohanum</i>	2	28	9.4	13	23	35,0
<i>A. x aran-tohanum</i>	2	29	7.8	5	19	27.5
<i>A. x aran-tohanum</i>	2	30	8.4	0	21	22.5

TABLE 2: BIOMETRICAL MEASUREMENTS OF MORPHOLOGICAL VARIABLES. 3 individuals/taxon; 43 measurements/individual

Taxon	Individual	Sample	Guard cell length (μm)
A. billotii	1	1	73.34
A. billotii	1	2	61.48
A. billotii	1	3	57.94
A. billotii	1	4	59.08
A. billotii	1	5	59.66
A. billotii	1	6	70.36
A. billotii	1	7	62.08
A. billotii	1	8	59.21
A. billotii	1	9	49.52
A. billotii	1	10	61.34
A. billotii	1	11	52.77
A. billotii	1	12	46.45
A. billotii	1	13	51.15
A. billotii	1	14	53.24
A. billotii	1	15	57.57
A. billotii	1	16	55.56
A. billotii	1	17	61.37
A. billotii	1	18	67.88
A. billotii	1	19	73.56
A. billotii	1	20	52.19
A. billotii	1	21	69.26
A. billotii	1	22	62.13
A. billotii	1	23	69.75
A. billotii	1	24	60.78
A. billotii	1	25	65.93
A. billotii	1	26	61.44
A. billotii	1	27	58.68
A. billotii	1	28	49.82
A. billotii	1	29	64.54
A. billotii	1	30	58.45
A. billotii	1	31	68.71
A. billotii	1	32	63.60
A. billotii	1	33	63.17
A. billotii	1	34	66.62
A. billotii	1	35	61.13
A. billotii	1	36	70.60
A. billotii	1	37	63.10

Taxon	Individual	Sample	Guard cell length (μm)
A. billotii	1	38	75.27
A. billotii	1	39	75.88
A. billotii	1	40	63.47
A. billotii	1	41	59.22
A. billotii	1	42	63.47
A. billotii	1	43	69.72
A. billotii	2	1	56.52
A. billotii	2	2	53.58
A. billotii	2	3	50.89
A. billotii	2	4	47.45
A. billotii	2	5	56.78
A. billotii	2	6	54.48
A. billotii	2	7	47.31
A. billotii	2	8	52.56
A. billotii	2	9	48.40
A. billotii	2	10	49.04
A. billotii	2	11	53.58
A. billotii	2	12	42.00
A. billotii	2	13	37.54
A. billotii	2	14	55.96
A. billotii	2	15	54.90
A. billotii	2	16	48.32
A. billotii	2	17	49.33
A. billotii	2	18	49.84
A. billotii	2	19	47.49
A. billotii	2	20	52.81
A. billotii	2	21	47.23
A. billotii	2	22	45.25
A. billotii	2	23	48.44
A. billotii	2	24	55.52
A. billotii	2	25	49.66
A. billotii	2	26	45.44
A. billotii	2	27	51.87
A. billotii	2	28	50.39
A. billotii	2	29	47.80
A. billotii	2	30	48.16
A. billotii	2	31	39.43
A. billotii	2	32	31.26
A. billotii	2	33	49.57
A. billotii	2	34	47.42
A. billotii	2	35	50.40

Taxon	Individual	Sample	Guard cell length (μm)
A. billotii	2	36	41.51
A. billotii	2	37	48.29
A. billotii	2	38	49.72
A. billotii	2	39	48.29
A. billotii	2	40	55.88
A. billotii	2	41	50.98
A. billotii	2	42	44.61
A. billotii	2	43	50.00
A. billotii	3	1	75.73
A. billotii	3	2	68.65
A. billotii	3	3	64.29
A. billotii	3	4	69.60
A. billotii	3	5	67.05
A. billotii	3	6	69.42
A. billotii	3	7	70.14
A. billotii	3	8	72.16
A. billotii	3	9	67.74
A. billotii	3	10	63.29
A. billotii	3	11	76.42
A. billotii	3	12	58.32
A. billotii	3	13	62.01
A. billotii	3	14	46.99
A. billotii	3	15	54.06
A. billotii	3	16	51.25
A. billotii	3	17	57.81
A. billotii	3	18	52.53
A. billotii	3	19	66.21
A. billotii	3	20	52.19
A. billotii	3	21	50.21
A. billotii	3	22	55.28
A. billotii	3	23	50.72
A. billotii	3	24	57.64
A. billotii	3	25	48.70
A. billotii	3	26	50.16
A. billotii	3	27	55.10
A. billotii	3	28	73.02
A. billotii	3	29	66.46
A. billotii	3	30	59.38
A. billotii	3	31	59.15
A. billotii	3	32	61.52
A. billotii	3	33	60.30

Taxon	Individual	Sample	Guard cell length (µm)
A. billotii	3	34	65.90
A. billotii	3	35	57.62
A. billotii	3	36	64.91
A. billotii	3	37	60.62
A. billotii	3	38	63.00
A. billotii	3	39	60.60
A. billotii	3	40	64.40
A. billotii	3	41	63.81
A. billotii	3	42	62.10
A. billotii	3	43	57.52
A. trichomanes	1	1	40.30
A. trichomanes	1	2	43.82
A. trichomanes	1	3	37.97
A. trichomanes	1	4	39.57
A. trichomanes	1	5	47.29
A. trichomanes	1	6	47.94
A. trichomanes	1	7	42.59
A. trichomanes	1	8	44.37
A. trichomanes	1	9	42.75
A. trichomanes	1	10	40.63
A. trichomanes	1	11	46.76
A. trichomanes	1	12	49.34
A. trichomanes	1	13	40.30
A. trichomanes	1	14	42.11
A. trichomanes	1	15	44.42
A. trichomanes	1	16	40.22
A. trichomanes	1	17	37.20
A. trichomanes	1	18	48.52
A. trichomanes	1	19	42.59
A. trichomanes	1	20	47.14
A. trichomanes	1	21	48.72
A. trichomanes	1	22	54.96
A. trichomanes	1	23	48.80
A. trichomanes	1	24	49.56
A. trichomanes	1	25	45.28
A. trichomanes	1	26	51.86
A. trichomanes	1	27	45.87
A. trichomanes	1	28	50.94
A. trichomanes	1	29	36.14
A. trichomanes	1	30	39.15
A. trichomanes	1	31	52.53

Taxon	Individual	Sample	Guard cell length (μm)
A. trichomanes	1	32	48.82
A. trichomanes	1	33	37.35
A. trichomanes	1	34	51.99
A. trichomanes	1	35	33.75
A. trichomanes	1	36	53.08
A. trichomanes	1	37	51.96
A. trichomanes	1	38	58.63
A. trichomanes	1	39	53.97
A. trichomanes	1	40	51.96
A. trichomanes	1	41	45.82
A. trichomanes	1	42	55.35
A. trichomanes	1	43	61.37
A. trichomanes	2	1	56.67
A. trichomanes	2	2	53.04
A. trichomanes	2	3	60.04
A. trichomanes	2	4	60.63
A. trichomanes	2	5	60.05
A. trichomanes	2	6	53.66
A. trichomanes	2	7	50.22
A. trichomanes	2	8	57.94
A. trichomanes	2	9	51.75
A. trichomanes	2	10	64.18
A. trichomanes	2	11	77.37
A. trichomanes	2	12	64.29
A. trichomanes	2	13	71.45
A. trichomanes	2	14	73.01
A. trichomanes	2	15	67.18
A. trichomanes	2	16	78.96
A. trichomanes	2	17	69.34
A. trichomanes	2	18	615.77
A. trichomanes	2	19	446.73
A. trichomanes	2	20	59.74
A. trichomanes	2	21	62.72
A. trichomanes	2	22	56.96
A. trichomanes	2	23	54.14
A. trichomanes	2	24	55.81
A. trichomanes	2	25	59.07
A. trichomanes	2	26	59.91
A. trichomanes	2	27	63.79
A. trichomanes	2	28	64.76
A. trichomanes	2	29	63.79

Taxon	Individual	Sample	Guard cell length (μm)
A. trichomanes	2	30	52.70
A. trichomanes	2	31	62.40
A. trichomanes	2	32	56.61
A. trichomanes	2	33	58.14
A. trichomanes	2	34	60.72
A. trichomanes	2	35	54.34
A. trichomanes	2	36	57.60
A. trichomanes	2	37	55.84
A. trichomanes	2	38	67.89
A. trichomanes	2	39	47.76
A. trichomanes	2	40	60.92
A. trichomanes	2	41	45.54
A. trichomanes	2	42	48.00
A. trichomanes	2	43	59.50
A. trichomanes	3	1	49.63
A. trichomanes	3	2	49.32
A. trichomanes	3	3	50.41
A. trichomanes	3	4	46.90
A. trichomanes	3	5	47.95
A. trichomanes	3	6	46.09
A. trichomanes	3	7	54.48
A. trichomanes	3	8	50.06
A. trichomanes	3	9	54.89
A. trichomanes	3	10	49.63
A. trichomanes	3	11	48.70
A. trichomanes	3	12	45.83
A. trichomanes	3	13	46.91
A. trichomanes	3	14	53.57
A. trichomanes	3	15	46.37
A. trichomanes	3	16	44.64
A. trichomanes	3	17	49.53
A. trichomanes	3	18	43.71
A. trichomanes	3	19	48.67
A. trichomanes	3	20	53.07
A. trichomanes	3	21	46.22
A. trichomanes	3	22	42.64
A. trichomanes	3	23	45.63
A. trichomanes	3	24	44.18
A. trichomanes	3	25	44.00
A. trichomanes	3	26	51.25
A. trichomanes	3	27	51.49

Taxon	Individual	Sample	Guard cell length (µm)
A. trichomanes	3	28	54.89
A. trichomanes	3	29	52.18
A. trichomanes	3	30	47.83
A. trichomanes	3	31	42.62
A. trichomanes	3	32	41.20
A. trichomanes	3	33	41.32
A. trichomanes	3	34	49.69
A. trichomanes	3	35	51.25
A. trichomanes	3	36	40.76
A. trichomanes	3	37	43.51
A. trichomanes	3	38	43.49
A. trichomanes	3	39	50.05
A. trichomanes	3	40	49.10
A. trichomanes	3	41	45.84
A. trichomanes	3	42	48.29
A. trichomanes	3	43	51.54
A. x aran-tohanum	2	1	59.70
A. x aran-tohanum	2	2	48.69
A. x aran-tohanum	2	3	55.67
A. x aran-tohanum	2	4	63.81
A. x aran-tohanum	2	5	51.99
A. x aran-tohanum	2	6	52.91
A. x aran-tohanum	2	7	37.52
A. x aran-tohanum	2	8	45.14
A. x aran-tohanum	2	9	51.16
A. x aran-tohanum	2	10	45.39
A. x aran-tohanum	2	11	49.66
A. x aran-tohanum	2	12	53.21
A. x aran-tohanum	2	13	42.39
A. x aran-tohanum	2	14	49.97
A. x aran-tohanum	2	15	55.06
A. x aran-tohanum	2	16	62.80
A. x aran-tohanum	2	17	57.12
A. x aran-tohanum	2	18	55.77
A. x aran-tohanum	2	19	44.06
A. x aran-tohanum	2	20	60.79
A. x aran-tohanum	2	21	47.73
A. x aran-tohanum	2	22	58.20
A. x aran-tohanum	2	23	52.09
A. x aran-tohanum	2	24	40.89
A. x aran-tohanum	2	25	55.80

Taxon	Individual	Sample	Guard cell length (µm)
A. x aran-tohanum	2	26	50.34
A. x aran-tohanum	2	27	48.49
A. x aran-tohanum	2	28	69.46
A. x aran-tohanum	2	29	58.20
A. x aran-tohanum	2	30	59.24
A. x aran-tohanum	2	31	62.03
A. x aran-tohanum	2	32	62.50
A. x aran-tohanum	2	33	60.97
A. x aran-tohanum	2	34	66.79
A. x aran-tohanum	2	35	65.53
A. x aran-tohanum	2	36	63.33
A. x aran-tohanum	2	37	51.65
A. x aran-tohanum	2	38	57.89
A. x aran-tohanum	2	39	55.24
A. x aran-tohanum	2	40	57.60
A. x aran-tohanum	2	41	66.23
A. x aran-tohanum	2	42	53.87
A. x aran-tohanum	2	43	49.17
A. x aran-tohanum	3	1	52.96
A. x aran-tohanum	3	2	72.69
A. x aran-tohanum	3	3	47.01
A. x aran-tohanum	3	4	48.44
A. x aran-tohanum	3	5	53.46
A. x aran-tohanum	3	6	54.02
A. x aran-tohanum	3	7	56.44
A. x aran-tohanum	3	8	53.71
A. x aran-tohanum	3	9	53.67
A. x aran-tohanum	3	10	48.72
A. x aran-tohanum	3	11	58.13
A. x aran-tohanum	3	12	51.05
A. x aran-tohanum	3	13	59.30
A. x aran-tohanum	3	14	62.06
A. x aran-tohanum	3	15	54.63
A. x aran-tohanum	3	16	56.57
A. x aran-tohanum	3	17	51.01
A. x aran-tohanum	3	18	52.26
A. x aran-tohanum	3	19	51.99
A. x aran-tohanum	3	20	47.72
A. x aran-tohanum	3	21	50.00
A. x aran-tohanum	3	22	51.94
A. x aran-tohanum	3	23	57.67

Taxon	Individual	Sample	Guard cell length (μm)
A. x aran-tohanum	3	24	47.47
A. x aran-tohanum	3	25	48.21
A. x aran-tohanum	3	26	52.18
A. x aran-tohanum	3	27	53.75
A. x aran-tohanum	3	28	53.05
A. x aran-tohanum	3	29	50.46
A. x aran-tohanum	3	30	53.07
A. x aran-tohanum	3	31	55.27
A. x aran-tohanum	3	32	49.46
A. x aran-tohanum	3	33	54.95
A. x aran-tohanum	3	34	53.70
A. x aran-tohanum	3	35	50.86
A. x aran-tohanum	3	36	48.63
A. x aran-tohanum	3	37	55.09
A. x aran-tohanum	3	38	50.51
A. x aran-tohanum	3	39	55.21
A. x aran-tohanum	3	40	60.93
A. x aran-tohanum	3	41	41.89
A. x aran-tohanum	3	42	62.58
A. x aran-tohanum	3	43	56.31

TABLE 3. MEASUREMENTS OF SPORE ABORTION. 4 Random samples of 100 spores per individual.

Individual		1		2		3	
		Normal	Abortive	Normal	Abortive	Normal	Abortive
<i>Asplenium trichomanes</i>	1	95	5	96	4	96	4
	2	100	0	96	4	100	0
	3	98	2	100	0	98	2
	4	97	3	97	3	98	2
<i>Asplenium billotii</i>	1	96	4	100	0	97	3
	2	100	0	99	1	96	4
	3	98	2	99	1	95	5
	4	98	2	99	1	99	1
<i>Asplenium aran-tohanum</i>	1	7	93	13	87	11	89
	2	6	94	8	92	6	94
	3	3	97	9	91	4	96
	4	3	97	--	--	10	90