

ACHENES (n=55)															
Fertility	Very low fertility	Sterile						Fertile							
Average achene length (mm)	2.34	No achenes	No achenes	No achenes	No achenes	No achenes	No achenes	3.00	3.16	3.14	Not measured	3.08	3.23	3.30	3.28
Average achene width (mm)	1.68	-	-	-	-	-	-	1.88	2.12	1.94	-	1.94	2.03	2.06	2.01
Min achene length (mm)	2.12	-	-	-	-	-	-	2.74	2.92	2.84	-	2.85	2.9	3.08	3.02
Max achene length (mm)	2.58	-	-	-	-	-	-	3.24	3.44	3.48	-	3.35	3.62	3.64	3.58
Min achene width (mm)	1.52	-	-	-	-	-	-	1.66	1.92	1.72	-	1.65	1.78	1.82	1.75
Max achene width (mm)	1.84	-	-	-	-	-	-	2.04	2.32	2.18	-	1.88	2.23	2.29	2.10
Range of achene length (mm)	2.12 – 2.58	-	-	-	-	-	-	2.74 – 3.24	2.92 – 3.44	2.84 – 3.48	-	2.85 – 3.3	2.9 – 3.6	3.08 – 3.64	3.02 – 3.58
Range of achene width (mm)	1.52 – 1.84	-	-	-	-	-	-	1.66 – 2.04	1.92 – 2.32	1.72 – 2.18	-	1.65 – 1.88	1.78 – 2.23	1.82 – 2.29	1.75 – 2.10
Achene Beak length (mm)	0.25	-	-	-	-	-	-	0.30	0.26	0.25	-	0.28	0.24	0.25	0.25
Achene Length / Width ratio (average)	1.39	-	-	-	-	-	-	1.59	1.49	1.62	-	1.59	1.59	1.61	1.63
Mesocarp : Exocarp Ratio	× 4.5–6.0	-	-	-	-	-	-	× 1.71	× 1.98	× 1.64	-	× 1.85	× 2.03	× 1.90	× 2.13
No. of persistent bristles	4 – 5	-	-	-	-	-	-	3 – 4	4 – 5	3 – 5	2 – 4	4 – 5	4 – 5	3 – 5	4 – 5
Length of bristles	1.8 – 2.9 mm	-	-	-	-	-	-	1.7–3.0 mm	2.0–2.9 mm	1.8–2.9 mm	1.8–2.8 mm	1.9–3.2 mm	1.7–3.0 mm	2.0–2.7 mm	1.8–3.0 mm
Outline shape	Obovate with a slight basal constriction and a subtruncate apex	-	-	-	-	-	-	Obovate with a slight basal constriction and rounded apex							
Surface of achenes (x16 magnification)	Cellular, polygonal (irregular and not rounded outline), arranged in short rows, 12-18 µm wide	-	-	-	-	-	-	Cellular, rounded (circular to elliptical) regular outline, in clusters and not distinctly in rows, 15–30 µm wide							
Achene colour	Olive brown becoming medium brown	-	-	-	-	-	-	Olive brown becoming dark brown							
Exocarp cells L/W ratio	× 4 – 5	-	-	-	-	-	-	× 1.8 – 2.1	× 2.1 – 2.4	× 1.9 – 2.1	× 1.8 – 2.4	× 1.7 – 2.2	× 1.8 – 2.3	× 1.7 – 2.2	× 2.0 – 2.4
Cross-section	Planoconvex to compressed subtrigonus. Abaxial side flat	-	-	-	-	-	-	Lenticular, plano-convex or less often faintly subtrigonus	Lenticular to plano-convex, rarely compressed subtrigonus	Lenticular, plano-convex to compressed subtrigonus	Lenticular, plano-convex to compressed subtrigonus	Mostly plano-convex, sometimes lenticular	Lenticular to compressed subtrigonus	Mostly plano-convex sometimes lenticular	Lenticular, plano-convex or rarely faintly subtrigonus
POLLEN (n=153–183)															
Pollen Length (range, µm)	51.0 – 63.3	50.3 – 62.7	48.7 – 58.3	51.7 – 53.6	46.3 – 68.1	54 – 64.3	47.2 – 54.9	53.7 – 62.7	45.8 – 64.1	50.3 – 63.6	50.4 – 59.7	51.6 – 71.6	49.6 – 58.2	46.9 – 66.4	49.4 – 65.7
Pollen Length (average, µm)	56.9	56.4	53.5	52.7	58.9	58.9	51.8	58.8	55	56.9	54.6	62.4	54.1	56.9	58.2
Pollen width (range, µm)	29.5 – 36.3	32.2 – 39.4	27.6 – 33	29.9 – 31.5	25.9 – 38	28.7 – 36.3	27.5 – 33.8	30.6 – 37.8	26.8 – 40.3	29.7 – 35.9	27.4 – 34.1	27.7 – 39.2	27.8 – 34.2	29.3 – 41.4	28.4 – 39.8
Pollen width (average, µm)	32.9	35.9	30.2	30.7	32.2	32.1	30.4	33.7	32.2	32.9	30.9	32.9	30.8	33.9	33.6
Pollen length:width ratio (range)	1.5 – 2.0	1.3 – 1.9	1.6 – 2.0	1.3 – 2.2	1.6 – 2.1	1.6 – 2.1	1.5 – 1.9	1.5 – 2.0	1.5 – 1.9	1.5 – 2.0	1.5 – 2.0	1.5 – 2.4	1.5 – 2.0	1.2 – 2.0	1.5 – 2.1
Pollen length:width ratio (average)	1.7	1.6	1.8	1.7	1.9	1.8	1.7	1.8	1.7	1.7	1.8	1.9	1.8	1.7	1.8



Fig. S1. Hymenoptera visiting and harvesting pollen from population BLB11 on the 30th of May, 2021 (left: *Apis mellifera* s. l.; middle and right Halictidae species).

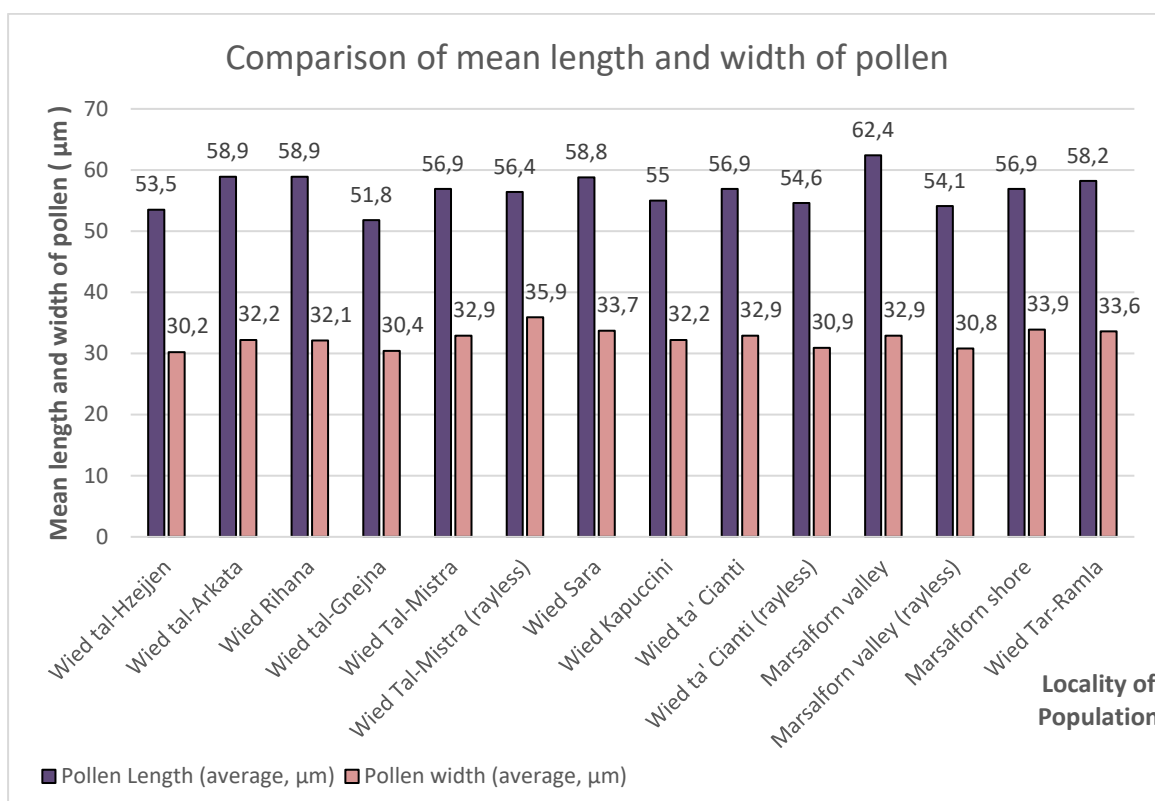


Fig. S2. Comparison of the mean length and width of pollen of *Bolboschoenus* populations from the Maltese Islands.

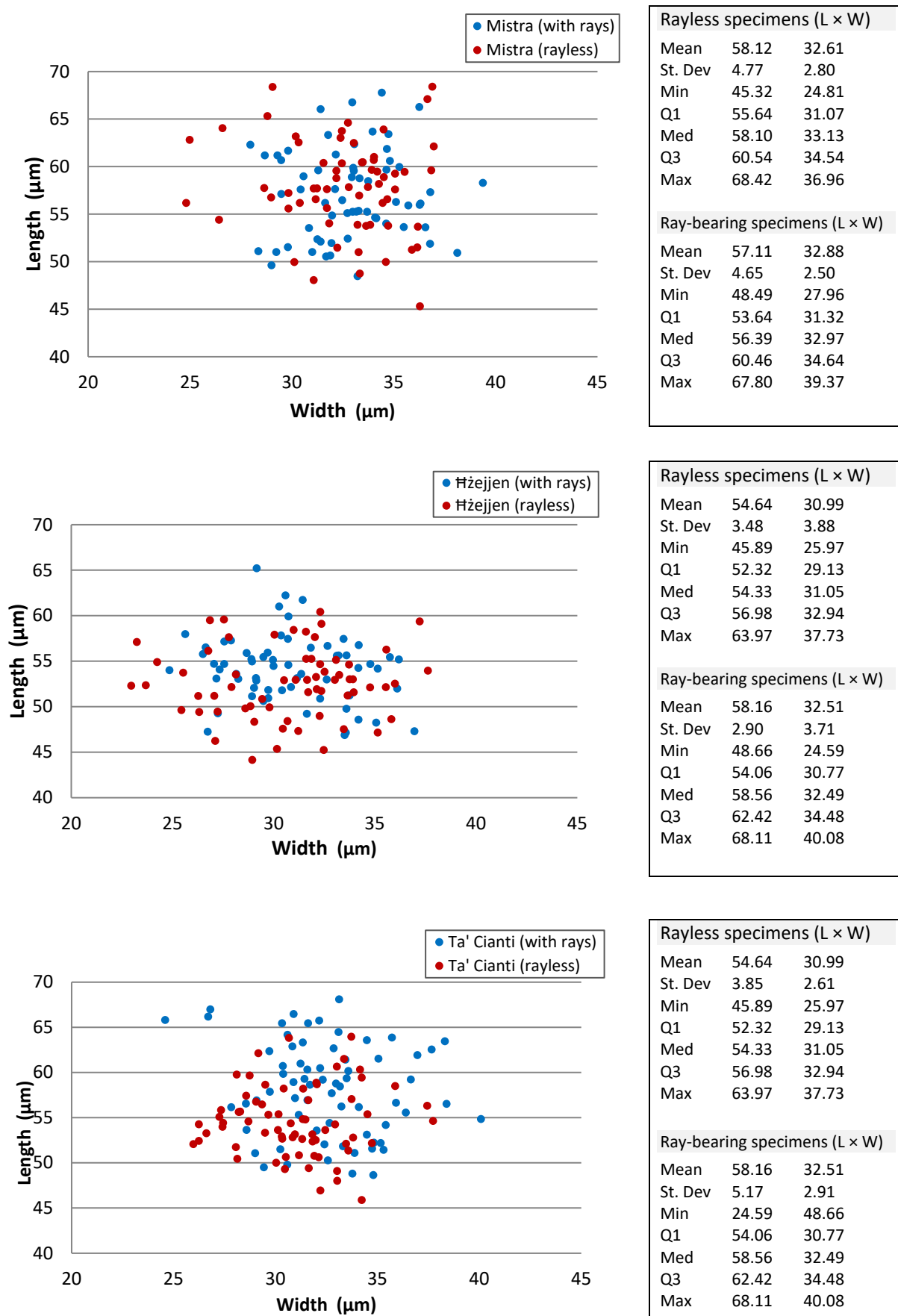


Fig. S3. Comparison of pollen sizes of rayless and ray-bearing specimens (n=63) in three tested populations.