

ESM Table 1 Full identified taxa list, with synanthropy, plant organ, and quantity

Taxon	Synanthropic level	Plant organ	Modern pellets	L. 162 pellets	L. 501 pellets	L. 162 sediment	L. 501 sediment
<u>Cereals*</u>							
<i>Hordeum vulgare</i> ssp. <i>distichum/spontaneum</i>	<i>cultivated/mostly natural</i>	rachis fragment	.	.	.	3	8
<i>Hordeum vulgare</i> ssp. <i>hexastichum</i>	<i>cultivated</i>	rachis fragment	.	.	.	9	9
<i>Hordeum vulgare</i>	<i>cultivated/mostly natural</i>	rachis fragment**	.	.	.	21	19
<i>Hordeum vulgare</i>	<i>cultivated</i>	grain	.	.	.	22	55
cf. <i>Hordeum vulgare</i>	<i>cultivated/mostly natural</i>	grain	.	.	.	.	10
<i>Triticum aestivum</i> s.l.	<i>cultivated</i>	rachis fragment	.	.	.	6	72
<i>Triticum aestivum</i> s.l.	<i>cultivated</i>	rachis fragment**	.	.	.	.	1
<i>Triticum turgidum</i> s.l.	<i>cultivated</i>	rachis fragment	.	.	.	80	31
<i>Triticum turgidum</i> s.l.	<i>cultivated</i>	rachis fragment**	.	.	.	2	1
<i>Triticum turgidum</i> s.l.	<i>cultivated</i>	grain	.	.	.	63	45
<i>Triticum</i> sp.	<i>cultivated</i>	rachis fragment	.	.	.	7	14
<i>Triticum</i> sp.	<i>cultivated</i>	rachis fragment**	.	.	.	1	.
<i>Triticum</i> sp.	<i>cultivated</i>	grain	.	.	.	.	11
<i>Triticum</i> sp.	<i>cultivated</i>	culm collar	.	.	.	1	.
<i>Triticum/Hordeum</i>	<i>cultivated/mostly natural</i>	rachis fragment	.	.	.	53	61
<i>Triticum/Hordeum</i>	<i>cultivated/mostly natural</i>	rachis fragment**	.	.	.	7	.
<i>Triticum/Hordeum</i>	<i>cultivated/mostly natural</i>	culm collar	1	.	.	9	4
<i>Triticum/Hordeum</i>	<i>cultivated/mostly natural</i>	grain	.	.	.	4	14
cf. <i>Triticum/Hordeum</i>	<i>cultivated/mostly natural</i>	culm node	1	.	.	35	53
cf. <i>Triticum/Hordeum</i>	<i>cultivated/mostly natural</i>	rhizomes	.	.	.	13	8
Cereal Subtotal			2			336	416
<u>Legumes</u>							
<i>Vicia ervilia</i>	<i>cultivated</i>	seed	.	.	.	6	8
<i>Lens culinaris</i>	<i>cultivated</i>	seed	.	.	.	2	3
<i>Lens culinaris</i>	<i>cultivated</i>	pedicel	.	.	.	1	18
<i>Trigonella foenum-graecum/berythea</i> ***	<i>cultivated</i>	seed	.	.	.	1	.
Legume Subtotal						10	29
<u>Fruit</u>							
<i>Ficus carica</i>	<i>cultivated</i>	nutlet	.	.	.	4	.
<i>Phoenix dactylifera</i>	<i>cultivated</i>	stone	.	.	.	1	1
<i>Punica granatum</i>	<i>cultivated</i>	seed	.	.	.	4	.
<i>Punica granatum</i>	<i>cultivated</i>	rind fragment	.	.	.	2	.
<i>Vitis vinifera</i>	<i>cultivated</i>	pip	.	.	.	11	2

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<i>Vitis vinifera</i>	<i>cultivated</i>	pedicel	.	.	.	4	1
Fruit Subtotal						26	4
<u>Wild/weed taxa</u>							
<i>Adonis dentata</i>	<i>obligate natural</i>	achene	.	.	.	1	1
<i>Aizoon hispanicum</i>	<i>obligate natural</i>	seed	30	5	.	20	3
<i>Anagallis arvensis</i>	<i>mostly natural</i>	seed	.	1	.	4	2
<i>Andrachne telephioides</i>	<i>mostly natural</i>	seed	.	.	.	2	.
<i>Anthemis pseudocotula</i>	<i>mostly natural</i>	head	.	.	.	.	1
<i>Anthemis pseudocotula</i>	<i>mostly natural</i>	achene	3	.	.	.	.
<i>Anthemis</i> sp.	<i>mostly natural/obligate natural</i>	achene	.	.	.	8	.
<i>Arnebia decumbens</i>	<i>obligate natural</i>	nutlet	.	.	.	1	4
<i>Asphodelus tenuifolius/fistulosus</i>	<i>obligate natural/mostly natural</i>	seed	.	.	.	2	1
<i>Astragalus callichrous</i>	<i>mostly natural</i>	seed	1	.	.	.	.
<i>Astragalus hamosus/arpilobus</i>	<i>mostly natural/obligate natural</i>	seed	.	.	.	.	7
<i>Astragalus</i> sp.	<i>mostly natural/obligate natural</i>	seed	.	.	.	.	11
<i>Astragalus</i> sp. Type A	<i>mostly natural/obligate natural</i>	seed	.	.	.	.	1
<i>Astragalus</i> sp. Type B	<i>mostly natural/obligate natural</i>	seed	.	.	.	.	1
<i>Astragalus tribuloides/asterias</i>	<i>obligate natural</i>	seed	10	.	.	.	.
<i>Astragalus/Trigonella</i>	NA	seed	.	.	.	.	1
<i>Avena barbata</i>	<i>mostly natural</i>	grain	.	.	.	.	1
<i>Avena barbata/fatua</i>	<i>mostly natural/obligate synanthropic</i>	grain	.	.	.	2	.
<i>Avena sterilis</i>	<i>mostly natural</i>	grain	.	.	.	1	.
<i>Avena sterilis</i>	<i>mostly natural</i>	lemma callus	.	.	.	2	1
<i>Avena</i> sp.	NA	fertile floret	.	.	.	1	2
<i>Avena</i> sp.	NA	grain	.	.	.	.	1
<i>Bassia muricata</i>	<i>obligate natural</i>	perianth	.	.	.	1	.
<i>Bellevalia</i> sp.	<i>mostly natural/obligate natural</i>	seed	.	.	.	1	.
<i>Brachypodium distachyon</i>	<i>equally synanthropic and natural</i>	grain	.	.	.	1	10
<i>Bromus</i> type	NA	grain	.	.	.	.	4
<i>Buglossoides tenuiflora</i>	<i>obligate natural</i>	nutlet	.	.	.	.	2
<i>Calendula</i> sp.	<i>mostly natural/obligate natural</i>	achene	.	.	.	2	2
<i>Caylusea hexagyna</i>	<i>mostly natural</i>	seed	.	.	.	9	2
<i>Centaurea pallescens</i>	<i>mostly natural</i>	achene	1	.	.	.	.
<i>Chenopodium murale</i>	<i>obligate synanthrope</i>	seed	2	.	.	14	.
cf. <i>Chenopodium murale</i>	<i>obligate synanthrope</i>	seed	.	.	.	16	.
<i>Cutandia memphitica/dichotoma</i>	<i>obligate natural</i>	grain	.	.	.	.	1

Taxon	Synanthropic level	Plant organ	Modern pellets	L. 162 pellets	L. 501 pellets	L. 162 sediment	L. 501 sediment
Cynareae	NA	achene	.	.	.	1	.
<i>Cynodon dactylon</i>	<i>equally synanthropic and natural</i>	grains and spikelets	1	9	1	202	73
<i>Echium angustifolium</i>	<i>mostly natural</i>	nutlet	.	.	.	.	1
<i>Emex spinosa</i>	<i>mostly natural</i>	fruiting perianth	.	.	.	4	8
<i>Emex spinosa</i>	<i>mostly natural</i>	nutlet	.	.	.	.	5
<i>Erucaria microcarpa</i>	<i>mostly natural</i>	siliqua upper joint	.	.	.	.	2
<i>Erucaria sp.</i>	<i>mostly natural/obligate natural</i>	siliqua	.	.	.	.	1
<i>Fumaria parviflora</i>	<i>mostly natural</i>	nutlet	.	.	.	.	1
<i>Fumaria parviflora/densiflora</i>	<i>mostly natural</i>	nutlet	.	.	.	1	4
<i>Galium aparine</i>	<i>mostly natural</i>	seed	.	.	.	1	.
<i>Galium/Asperula</i>	NA	seed	.	.	.	.	1
<i>Glebionis coronaria</i>	<i>equally synanthropic and natural</i>	achene	.	.	.	1	.
<i>Gypsophila capillaris</i>	<i>obligate natural</i>	seed	.	.	.	1	.
<i>Hordeum glaucum</i>	<i>equally synanthropic and natural</i>	grain	.	.	.	.	1
<i>Hordeum glaucum/marinum</i>	<i>equally synanthropic and natural/obligate natural</i>	grain	.	.	.	.	1
<i>Hordeum marinum/geniculatum</i>	<i>obligate natural/mostly natural</i>	grain	.	.	.	.	2
<i>Lolium rigidum</i>	<i>equally synanthropic and natural</i>	grain	.	.	.	.	1
<i>Lolium rigidum</i>	<i>equally synanthropic and natural</i>	rachis fragment	.	.	.	.	1
<i>Lolium rigidum/perenne</i>	<i>equally synanthropic and natural/mostly natural</i>	grain	.	.	.	1	8
<i>Lolium sp.</i>	NA	grain	.	.	.	.	1
<i>Lolium sp.</i>	NA	rachis fragment	.	.	.	.	1
<i>Lolium temulentum</i>	<i>obligate synanthrope</i>	grain	.	.	.	.	1
<i>Malva aegyptia</i>	<i>obligate natural</i>	seed	.	1	.	.	.
<i>Malva parviflora</i>	<i>mostly synanthropic</i>	receptacle axis	.	.	.	1	.
<i>Malva parviflora/oxyloba</i>	<i>mostly synanthropic</i>	seed and mericarp	.	.	.	14	8
<i>Malva sp.</i>	NA	mericarp	2	.	.	.	2
<i>Medicago astroites</i>	<i>obligate natural</i>	seed	.	.	.	1	3
<i>Medicago polymorpha/marina</i>	<i>mostly natural/obligate natural</i>	seed	.	.	.	3	5
<i>Melilotus sulcatus</i>	<i>obligate natural</i>	pod	.	.	.	1	.
<i>Mesembryanthemum nodiflorum</i>	<i>mostly natural</i>	capsule with seeds	.	.	.	.	1
<i>Mesembryanthemum nodiflorum</i>	<i>mostly natural</i>	seed	.	.	.	.	9
<i>Neslia apiculata</i>	<i>mostly natural</i>	siliqua	.	.	.	1	.
<i>Papaver sp.</i>	NA	seed	.	.	.	.	1
<i>Phalaris minor</i>	<i>mostly natural</i>	grain	.	.	.	2	16
<i>Phalaris paradoxa</i>	<i>mostly synanthropic</i>	sterile spikelet	.	.	.	3	1
<i>Plantago chamaepsyllium/notata</i>	<i>obligate natural</i>	seed	.	.	.	1	2

Taxon	Synanthropic level	Plant organ	Modern pellets	L. 162 pellets	L. 501 pellets	L. 162 sediment	L. 501 sediment
<i>Plantago ovata</i>	<i>obligate natural</i>	seed	5	.	.	1	.
<i>Plantago</i> sp.	NA	seed	25	.	.	4	.
<i>Pulicaria incisa</i>	<i>mostly natural</i>	achene	.	1	.	.	.
<i>Retama raetam</i>	<i>obligate natural</i>	seed	4	.	.	.	.
<i>Rumex</i> sp.	NA	nutlet	.	.	.	1	.
Salsoleae	NA	stem segment	11	.	.	2	3
<i>Schismus arabicus/barbatus</i>	<i>obligate natural</i>	grain	29	.	.	.	.
<i>Scorpiurus muricatus</i>	<i>obligate natural</i>	seed	1	.	.	.	1
<i>Silene colorata/decipiens</i>	<i>mostly natural</i>	seed	.	.	.	8	4
<i>Silene</i> sp.	NA	seed	.	.	.	3	.
<i>Spergula fallax</i>	<i>mostly synanthropic</i>	seed	.	.	.	1	.
<i>Stipa capensis</i>	<i>obligate natural</i>	dispersal unit	1	.	.	.	.
<i>Tamarix aphylla</i>	<i>obligate natural</i>	stem segment	.	.	.	19	2
<i>Thymelaea hirsuta</i>	<i>obligate natural; economic plant</i>	nutlet	.	.	.	4	1
<i>Thymelaea hirsuta</i>	<i>obligate natural; economic plant</i>	leaf	.	.	.	47	45
<i>Thymelaea hirsuta</i>	<i>obligate natural; economic plant</i>	bud with leaves	.	.	.	5	2
<i>Thymelaea hirsuta</i>	<i>obligate natural; economic plant</i>	flower	.	.	.	1	.
cf. <i>Trifolium campestre</i>	<i>obligate natural</i>	seed	.	1	.	7	.
cf. <i>Trifolium tomentosum</i>	<i>obligate natural</i>	seed	7	.	.	.	.
<i>Trifolium</i> sp. Type A	NA	seed	.	.	.	13	1
<i>Trifolium</i> sp. Type B	NA	seed	.	.	.	1	.
cf. <i>Trifolium</i>	NA	seed	.	.	.	.	1
<i>Trigonella arabica</i>	<i>mostly natural</i>	seed	.	.	.	.	20
<i>Vaccaria hispanica</i>	<i>mostly natural</i>	seed	.	.	.	.	3
cf. <i>Vaccaria hispanica</i>	<i>mostly natural</i>	seed	.	.	.	1	.
<i>Vicia sativa</i>	<i>mostly natural</i>	seed	.	.	.	.	1
cf. <i>Vicia sativa</i>	<i>mostly natural</i>	seed	.	.	.	1	.
<i>Vicia/Lathyrus</i>	NA	seed	.	.	.	1	1
Total identified seeds			121	18	1	485	395
Total identified plant parts			135	18	1	819	754
% seeds			90%	100%	100%	59%	52%

* Some finds in this category could be non-cultivated grasses (*Hordeum vulgare* subsp. *spontaneum*); we assume the vast majority are cultivated, based on size and extrapolation from quantities of those definitively identified to species.

** Rachis fragments with attached dung matrix.

***Although *T. berythea* is a wild species, its natural distribution does not extend to the Negev; we therefore consider the *T. foenum-graecum/berythea* find to be cultivated.

ESM Table 2 Number of identified species by synanthropy and context

Synanthropy	Modern pellets	Archaeol. pellets	Archaeol. sediments
Obligate natural	8	3	15
Mostly natural	3	2	18
Equally synanthropic and natural	1	1	5
Mostly synanthropic			3
Obligate synanthropic	1		2
Cultivated			10
Total	13	6	53

ESM Table 3 Comparison of synanthropy in archaeological samples with modern vegetation in the Negev Highlands and *Flora Palaestina* region

Synanthropy	Archaeological sediments		Modern Negev Highlands		Modern <i>Flora Palaestina</i>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Obligate natural	15	28	595	67	2,063	71
Mostly natural	18	34	177	20	398	14
Equally synanthropic and natural	5	9	15	2	113	4
Mostly synanthropic	3	6	39	4	109	4
Obligate synanthropic/cultivated	12	23	61	7	220	8
Total	53	100	887	100	2,903	100