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RESEARCH ARTICLE

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Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high-mountain flora

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Abstract

Questions: Is there evidence of recent altitudinal range shifts in a hyper-arid Middle Eastern desert mountain flora? How do the directions of shift for upper and lower altitudinal range limits of plants vary?

Location: Hyper-arid mountain desert, St Katherine Protectorate, South Sinai, Egypt.

Method: We tested for shifts in both upper and lower altitudinal range limits by comparing a 1970s data set of recorded species' limits with recent surveys using altitudinal transects across 36 sites. Altitudinal limits between 63 paired upper-limit and 22 paired lower-limit values from the 1970s and 2014 were compared using paired *t*-tests; binomial tests were used to indicate the dominant direction of change. The upper and lower limits of 22 species were considered together to allow assessment of overall altitudinal range size changes. In order to avoid the potential effect of yearly environmental fluctuations on the distributions of annual species, subsets of upper and lower limit shifts were taken for perennials, and for trees and shrubs.

Results: Our results show significant overall up-slope shifts in mean upper altitudinal limits and significant overall down-slope shifts in mean lower altitudinal limits. A majority of assessed species expanded their altitudinal ranges, but the responses of individual species varied.

Conclusions: Since perennial herbs/graminoids, as well as trees and shrubs, show strong patterns of change, we suggest there has been a long-term shift in altitudinal range in South Sinai's mountain flora. More research effort needs to be focussed on the drivers of range shift responses in arid regions.

KEYWORDS

altitude, climate change, desert, endemic plants, mountains, plant diversity, range margins, relict plants

1 | INTRODUCTION

Recent range shifts in both latitudinal and altitudinal distributions have been recorded across animal and plant taxa in response to changes in climate, with ranges expanding at high latitudes and altitudes, and contracting at lower latitudes and altitudes (Chen, Hill, Ohlemüller, Roy, & Thomas, 2011; Wilson et al., 2005). Lower latitudinal and altitudinal range limits, the rear or trailing edges of distributions, have received little attention (Hampe & Petit, 2005), despite these margins often contributing to higher levels of regional genetic diversity (Hewitt, 2004) and being important in the maintenance of biodiversity (Hampe & Petit, 2005). Given the potential conservation implications of the lower margin shifts of plants, it is therefore surprising that empirical studies are so poorly represented in the literature (Lenoir & Svenning, 2015). It is true that lower limits are harder to assess, with a less clear-cut position influenced by a multitude of factors rather than mainly climatic (e.g., biotic interactions, and propagules moving downhill under gravity). Nevertheless,

in arid regions, water availability is a crucial factor, which is expected to ameliorate towards higher elevations through convective cloud formation, and hence lower limits may be more easily recognized.

Under conditions of global warming it seems logical that up-slope range shifts of plants attributed to changing climatic factors would be the norm (Gottfried et al., 2012; Jump, Huang, & Chou, 2012; Klanderud & Birks, 2003; Matteodo, Wipf, Stöckli, Rixen, & Vittoz, 2013; Pauli, Gottfried, Reiter, Klettner, & Grabherr, 2007; Stöckl, Wipf, Nilsson, & Rixen, 2011; Walther, Beißner, & Burga, 2005; Wipf, Stöckli, Herz, & Rixen, 2013). It is important to note that changes such as these are not necessarily always consistent with temperature being the sole dominant factor inducing change (Grytnes et al., 2014). However it seems probable that changes in both the thermal regime and water availability will be the main drivers of altitudinal changes, with adverse changes in both (e.g., warmer and drier) causing the greatest pressure (McCain & Colwell, 2011).

Globally, mountainous regions represent important hotspots of endemism (Körner, 2003; Nagy & Grabherr, 2009), but mountain species are especially vulnerable to extinction due to habitat loss induced by climate change, because shifting climatic zones will reduce suitable habitat area, leading to 'mountain-top extinctions' (Dirnböck, Essl, & Rabitsch, 2011). Plant species in arid regions may also be very susceptible to climate change, and the loss of arid-land endemics may occur in both lowland (Foden et al., 2007) and mountain (Van de Ven, Weiss, & Ernst, 2007) environments under increased levels of global warming.

There are very few studies of recent altitudinal changes in plant distributions from subtropical or arid regions (Jump et al., 2012; Lenoir & Svenning, 2015). We study here the flora of the hyper-arid desert mountains of South Sinai, Egypt. Egypt and the wider Middle East region has seen recent temperature increases (Domroes & El-Tantawi, 2005; Zhang et al., 2005), with average warmest daily maximum temperatures increasing by >1°C since the 1970s (Donat et al., 2014). Sinai's southern montane regions contain relatively high levels of biodiversity (Zalat et al., 2009), and are home to 19 of Egypt's 33 endemic plant species (Rashad, Basset, Hemeed, Alqamy, & Wacher, 2002). The area is recognized as one of the most important centres of plant diversity in the Middle East (IUCN 1994). Greater botanical diversity has been suggested to occur at higher altitudes in Sinai due to a diversity of habitat types and favourable environmental factors, especially the increased water availability, precipitation and soil moisture retention in high-altitude areas (Moustafa & Klopatek 1995; Moustafa & Zaghloul, 1996).

Many species of plants in the high mountains of southern Sinai exhibit disjunct distributions of Holarctic species found more commonly further north, suggesting that these species are relics of a more humid, colder past (Shmida, 1977). The isolation of plants that thrive in cooler damper climates in refugia on the highest of Sinai's mountains suggests their vulnerability to rising temperatures. Recent shifts in plant altitudinal distributions in the Middle East are expected, but remain completely unstudied until now, and especially not with the multifaceted approach of looking at leading and trailing edge changes simultaneously.

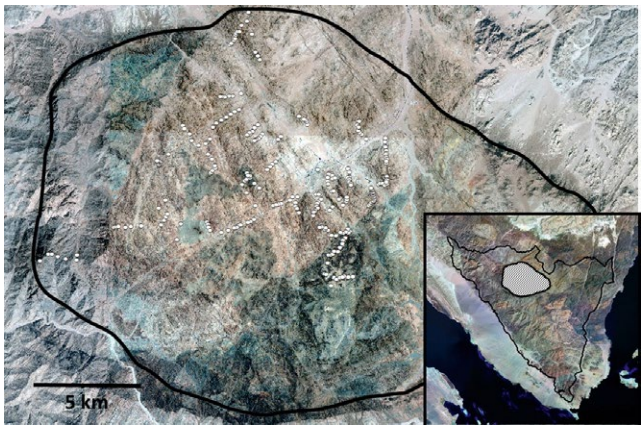

FIGURE 1 Outline of igneous ring-dyke delimiting the high mountain region within the St Katherine Protectorate. Positions of 2014 survey sites shown as white dots with 5-km scale bar. Inset: St Katherine Protectorate outline in South Sinai; shaded area St Katherine ring-dyke and region of 1970s transect surveys [Colour figure can be viewed at wileyonlinelibrary.com]

Therefore, we focus here on the following hypotheses. First we ask whether there is evidence of recent range shifts in the high-mountain flora in South Sinai, predicting that these should be evident as largely up-slope movements. The null hypothesis is of course no change, but alternatively the mean response may be zero because of idiosyncratic responses of the different species, which may not respond to temperature but to other factors, especially water balance (cf. Rapacciuolo et al., 2014). Second, we study the directions of shift for upper and lower altitudinal range limits, and split the species into growth forms to help interpret the results. The prediction is that upper and lower limits should move in concert, and that all plants should show the same patterns.

2 | METHODS

We use the approach of comparing modern with historical data (Stöckl et al., 2011). Ideally the methodologies and locations should be identical, but in this case the earlier surveys were not quantitative and did not locate the transects with geographic coordinates. With this caveat, the unique existence of the earlier data for the Middle East makes the comparison worthwhile.

2.1 | Study region

The St Katherine Protectorate covers much (4,350 km^2, almost half the area) of the southern peninsula of Sinai, encompassing the majority of a high-altitude massif and reaching down to sea level to form one of Egypt's largest protected areas (Grainger & Gilbert, 2008). An igneous pre-Cambrian ring-dyke encircles 640 km^2 of the centre of the Protectorate. The ring-dyke contains Egypt's highest mountain, Mt St Katherine, at 2,643 m. The mountainous terrain is inter-cut with dry steep-sided wadis (valleys). South Sinai receives higher than

average rainfall (62 mm; Zahran & Willis, 2008) and generally cooler temperatures (summer mean: 30°C) than the rest of Egypt (Grainger & Gilbert, 2008).

2.2 | Historical data

To assess temporal changes in upper altitudinal range limits, we compared our field data with a 1970s data set compiled by Arbel and Shmida (1979) in a semi-quantitative format. Data were collected during the years 1974–1976 and focused on the mountainous area within the St Katherine ring-dyke (see Figure 1 map inset: shaded area).

Vegetation was sampled by recording species richness in quadrats of area 100 m^2. Quadrats were placed along transects divided into altitudinal units of 200 m running up wadis and mountain slopes. In addition, quadrats were placed wherever habitat type or plant dominance changed noticeably. Each altitudinal unit was sampled several times in different locations but the coordinates for each quadrat were not recorded. Additional incidental vegetation observations were included from lower altitudes in the St Katherine Protectorate falling outside the ring-dyke and its high mountains; these observations were incorporated into the main data set. Unfortunately the only remaining details of the original data set available to this study were records of minimum and maximum altitudes for plant species recorded at a resolution of 100 m altitude, together with a subjective assessment of relative abundance (common, very frequent, frequent, rare, very rare, found once) and statements of their common habitats (gorges, weathered slopes, gravel wadis, rock cracks, wet places, etc.; see Appendix S1: Table S1).

2.3 | New data

Quantitative data were collected during field surveys running from late Oct to mid-Dec 2014. Surveys were carried out in the high mountains within the igneous ring-dyke area over an altitude range of 1,324 m to 2,629 m (see Figure 1 for survey locations, Appendix S1: Table S3 for quadrat GPS locations, Appendix S1: Table S4 for site photos and descriptions, Appendix S1: Table S5 for species lists and abundances by quadrat). We were not able to revisit exact sites surveyed in the 1970s as quadrat location had not been recorded; instead we surveyed extensively within the same mountainous region (Figure 1) including the same mountains and habitats as the older surveys. It is probable that new and old quadrats were close or very close to one another.

Vegetation was sampled along sloped transects running through wadis, mountain slopes and gullies. The lengths of each transect were determined by the scale of the landscape, running from the lower to the upper altitudinal limits to encompass as large an altitudinal range as possible. As landform/habitat type is a major determinant of the diversity and community composition of the vegetation in Sinai (Moustafa & Klopatek 1995), the location of transects was chosen to cover all major habitat types.

Quadrats of area 100 m^2 were demarcated along transects approximately every 50-m change in elevation where terrain permitted. In total 283 quadrats were placed in 36 sites covering 28,300 m^2. Location and altitude above sea level were measured at the centre of the quadrats using a Garmin etrex 30 hand-held GPS with the GPS + GLONASS (±3 m) and barometric altimeter (±3 m) functions, respectively. At each quadrat, we recorded: aspect of slope to the nearest cardinal point; gradient to the nearest 5° (360° scale); a brief site description; and a photograph. All vascular plant species in the quadrats were identified (using Boulos, 1999–2005) and individually counted (with individuals of multiple stemmed/clumping plants defined as those with stems returning to a common root stock): plant names follow Boulos (1999–2005).

A total of 241 species were recorded from the 1970s: of these, notable absences compared with the plants of 2014 were *Lavandula pubescens* and *Gomphocarpus sinaicus*. The identity of *Chiliadenus montanus* was uncertain from records and was therefore not included in analyses to avoid inaccuracy due to ambiguity. *Fagonia arabica* and *F. bruguieri* were not differentiated in the earlier data set, and therefore for the purposes of comparison the records collected in 2014 were amalgamated for these species. In total, 81 species were available with upper altitudinal limits from both the 1970s and 2014. The significantly larger sampling effort required to accurately establish the lower altitudinal limits for the more widespread species was beyond the scope of this study, which deals specifically with the high-altitude flora of South Sinai. However, the lower altitudinal limits of 25 species fell within the altitudinal range surveyed, thereby permitting their analysis.

Numerical abundance data were not available for species from the 1970s data set. In the 2014 data set, to allow reasonably accurate estimation of altitudinal limits, only species for which more than ten individuals had been recorded during the entirety of the 2014 field surveys were selected (see Appendix S1: Table S2). This selection allowed the upper limits of 63 and lower limits of 22 species to be identified. Subsets of upper- and lower-limit shifts were taken for perennials, and trees and shrubs to allow comparisons to be made that avoided the potential effect of yearly environmental (specifically rainfall) fluctuation on the distributions of annual species.

2.4 | Statistical methods

All statistical and graphical analyses were carried out using R (v 3.1.2, R Foundation for Statistical Computing, Vienna, AT).

2.4.1 | Patterns of diversity in the new data

To describe the 2014 data set, weighted mean (±*SE*) elevations were calculated for all species recorded (see Figure S1 & S2). For each quadrat, the three Hill's numbers (Chao, Chiu, & Hsieh, 2012) were calculated as measures of components of diversity representing effective species richness. The general equation is:

$$ {}^{q}D = \left(\sum {p_i^q} \right)^{(1/(1-q))} $$

TABLE 1 Description of pattern of movement of upper and lower altitudinal limits for 22 individual plant species where both upper and lower limits could be measured

Species	Upper limit 1970s	Upper limit 2014	Lower limit 1970s	Lower limit 2014	Limit movement patterns		Range size change
					Lower limit	Upper limit	
Alkanna orientalis	2,500	2,575	1,500	1,375	Down	Stationary	expanded
Astragalus echinus	2,600	2,425	2,000	1,825	Down	Down	no change
Calipeltis cucullaris	2,100	2,425	1,500	1,425	Stationary	Up	expanded
Colchicum guessfeldtianum	2,500	2,325	1,500	1,925	Up	down	contracted
Cotoneaster orbicularis	2,200	2,425	1,800	1,725	Stationary	up	expanded
Crataegus x sinaica	2,300	2,375	1,600	1,625	Stationary	stationary	no change
Globularia arabica	2,100	2,275	1,700	1,425	Down	Up	expanded
Nepeta septemcrenata	2,640	2,325	1,700	1,725	Stationary	Down	contracted
Origanum syriacum	2,000	1,975	1,600	1,425	Down	Stationary	expanded
Phlomis aurea	2,200	2,425	1,550	1,375	Down	Up	expanded
Polygala sinaica	2,640	2,625	1,900	1,675	Down	Stationary	expanded
Pterocephalus sanctus	2,640	2,575	1,600	1,625	Stationary	Stationary	no change
Pulicaria undulata	1,900	2,175	1,400	1,375	Stationary	Up	expanded
Rubus sanctus	1,800	1,725	1,800	1,625	Down	Stationary	expanded
Salvia multicaulis	2,100	1,975	1,900	1,725	Down	Down	expanded
Scariola orientalis	2,500	2,325	1,800	1,525	Down	Down	expanded
Silene leucophylla	2,300	2,625	1,750	1,425	Down	Up	expanded
Silene schimperiana	2,300	2,175	1,500	1,521	Stationary	Down	contracted
Stipa parviflora	2,500	2,325	1,600	1,525	Stationary	Down	contracted
Thymus decussatus	2,400	2,275	1,900	1,725	Down	Down	expanded
Verbascum decaisneanum	2,300	2,525	1,600	1,525	Stationary	Up	expanded
Verbascum sinaiticum	2,400	2,575	1,500	1,375	Down	Up	expanded

Limits are in m a.s.l.

where q = 0, 1 or 2. Ascending Hill's numbers (q values) give reducing weight to the less-abundant species, reflecting the relative ecological importance of more abundant species (Hill, 1973). Thus ^{0}D measures species richness, ^{1}D represents the number of 'typical' common species, while ^{2}D represents the number of 'very abundant' species present in the community (Chao et al., 2012). Therefore, considered together, Hill's numbers present a picture of community evenness.

To describe altitudinal patterns of diversity in the 2014 data, abundances were assigned to altitudinal bands of 50 m. Smoothing splines were fitted to the three Hill's numbers with altitude as the predictor, using the GAM (Generalized Additive Model) function of R-package *ggplot2* (Wickham, 2009).

2.4.2 | Range shift comparison

To estimate shifts in altitudinal ranges, the altitudinal limits between 63 paired upper-limit and 22 paired lower-limit values from the 1970s and 2014 were compared using paired *t*-tests to test the null hypothesis that the mean difference was zero. Sign tests (i.e., binomial tests on the numbers of negative and positive changes) were used to indicate the dominant direction of change. 22 species had estimates of both upper and lower limits, and so were considered together to allow assessment of overall altitudinal range size changes. Species were categorized as showing no change, expanded range or contracted range (Table 1). Movement of <100 m for either limit was regarded as stationary in view of the measurement resolution of the 1970s data. A binomial test was used to identify whether expansion or contraction of ranges was the dominant pattern.

As an aid to interpretation, reasons for the changes were explored in a GLM using the differences in altitudinal limits between 2014 and the 1970s as the response variable, and a variety of predictors: flowering season(s), basic growth form (herb, shrub or tree), Raunkiær life form, and basic life form (annual or perennial). The best fitting models and predictors were selected through use of AICs.

3 | RESULTS

3.1 | Patterns of diversity in the new data

The overall patterns of diversity were indicated from the three Hill numbers, but each followed a distinct altitudinal pattern (see Figure 2). The highest levels of species richness (^{0}D) were found at higher altitudes, decreasing down a shallow concave curve with the lowest values at lower altitude (~1,400–1,600 m). The number of 'typical' (common) species, ^{1}D, was highest at lower-middle elevations (~1,700–1,800 m), and declined with increasing altitude. In contrast, the number of abundant species, ^{2}D, was lowest at lower-middle elevations, with highest values at the top of the altitude range. The summary data are in Appendix S1: Tables S2 and S3.

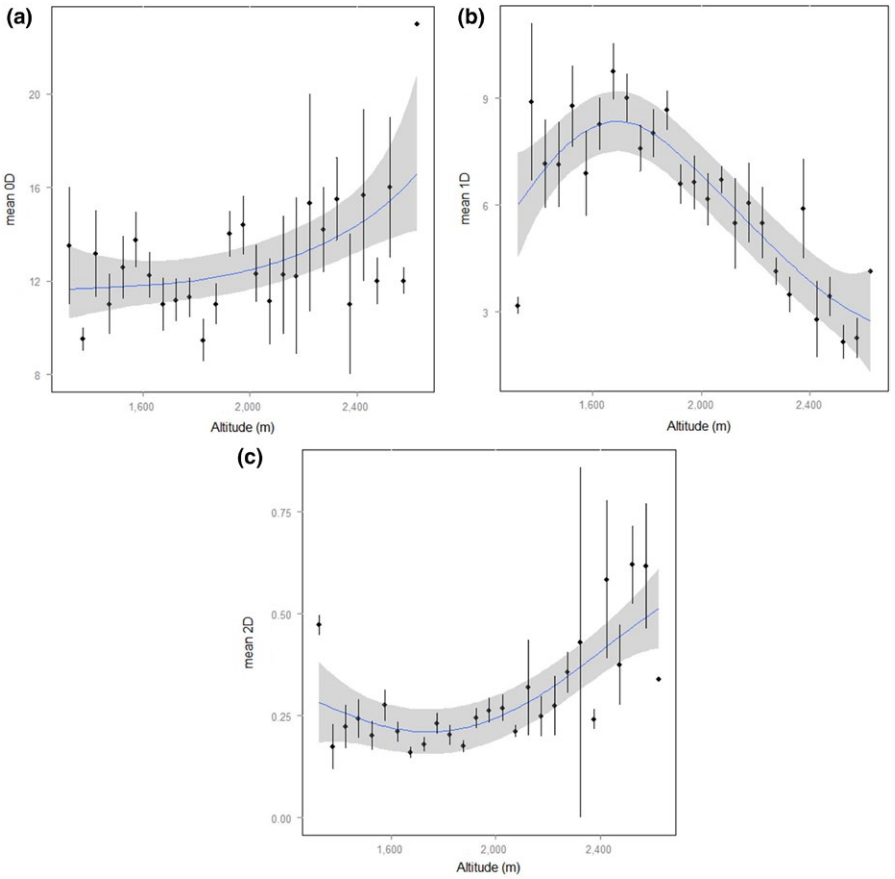

FIGURE 2 Hill's numbers (see Chao et al., 2012) for diversity by altitude with fitted GAM model with Normal errors and 95% confidence region. Ascending Hill numbers give reducing weight to less-abundant species: (a) mean ^{0}D species richness); (b) mean ^{1}D (number of 'typical' common species); (c) mean ^{2}D (number of 'abundant' species) [Colour figure can be viewed at wileyonlinelibrary.com]

3.2 | Range shift comparisons

Comparison of the upper altitudinal limits from the 1970s and 2014 for 63 plant species indicated a significant difference between mean past and present upper altitudinal limits, with the current limit (mean: 2,228.6 ± 294.5 m) larger than in the past (mean: 2,125.2 ± 350.2 m; paired $t = 3.37$, $df = 61$, $p = 0.0013$). Although the mean upper altitude limit for all species was found to be significantly higher, there was no evidence of a preponderance of species increasing rather than decreasing their upper altitudinal limit (38 of 63 spp.; binomial test $p = 0.065$; see Figure 3 for details). However, for species differing by >100 m, a significantly larger number of species moved up-slope (26/40; binomial test $p = 0.04$). This was also the case for species differing by >250 m (16/18; binomial test $p < 0.001$).

The 22 species whose lower altitudinal limits were assessed showed a significantly downward shifted mean lower altitudinal limit (current mean: 1,568.0 ± 162.1 m, past mean: 1,668.2 ± 166.6 m; paired $t = 3.02$, $df = 20$, $p = 0.0064$). In addition to this downward shift overall, a significantly larger number of species shifted their individual lower altitudinal limits downwards than did not (17/22; binomial test $p = 0.008$; see Figure 4 for details). This finding also held true when only considering species for which movement was >100 m (12/13; binomial test $p = 0.002$).

In species with measurements for both upper and lower altitudinal limits, a significant majority expanded their altitudinal ranges between the 1970s and 2014 (15/22′ binomial test $p < 0.001$). Three species showed divergence of altitudinal limits (lower limit moved down-slope, upper limit moved up-slope) and one convergence (lower limit up-slope, upper limit down-slope; see Table 1), whilst four showed parallel down-slope movement of upper and lower limits. The upper and lower limits of each species thus appeared to move independently. Lower limits moved down in 12 species, up in one and remained stationary for nine. Upper limits moved down in eight species, up in eight and remained stationary for six species. Of the species that shifted their lower limits down-slope, there was no preponderance of species that also showed parallel down-slope movement of their upper limits (4/12; binomial test $p = 0.927$).

Basic life form (annual or perennial) was the best predictor of the change in upper altitudinal limit ($F_{1,61} = 6.9$, $p = 0.01$), with annuals on average moving up four times further than perennials (292 m vs 72 m). There was only one annual and 21 perennials with measured changes in lower altitudinal limit, and the value for the former (down-slope 75 m) was not different from the distribution of values for the perennials (which on average moved down-slope 101.4 ± 34.7 m; one-sample $t = 0.76$, $df = 19$, n.s.). Basic life form was the best additional predictor in a GLM predicting the 2014 upper limits from

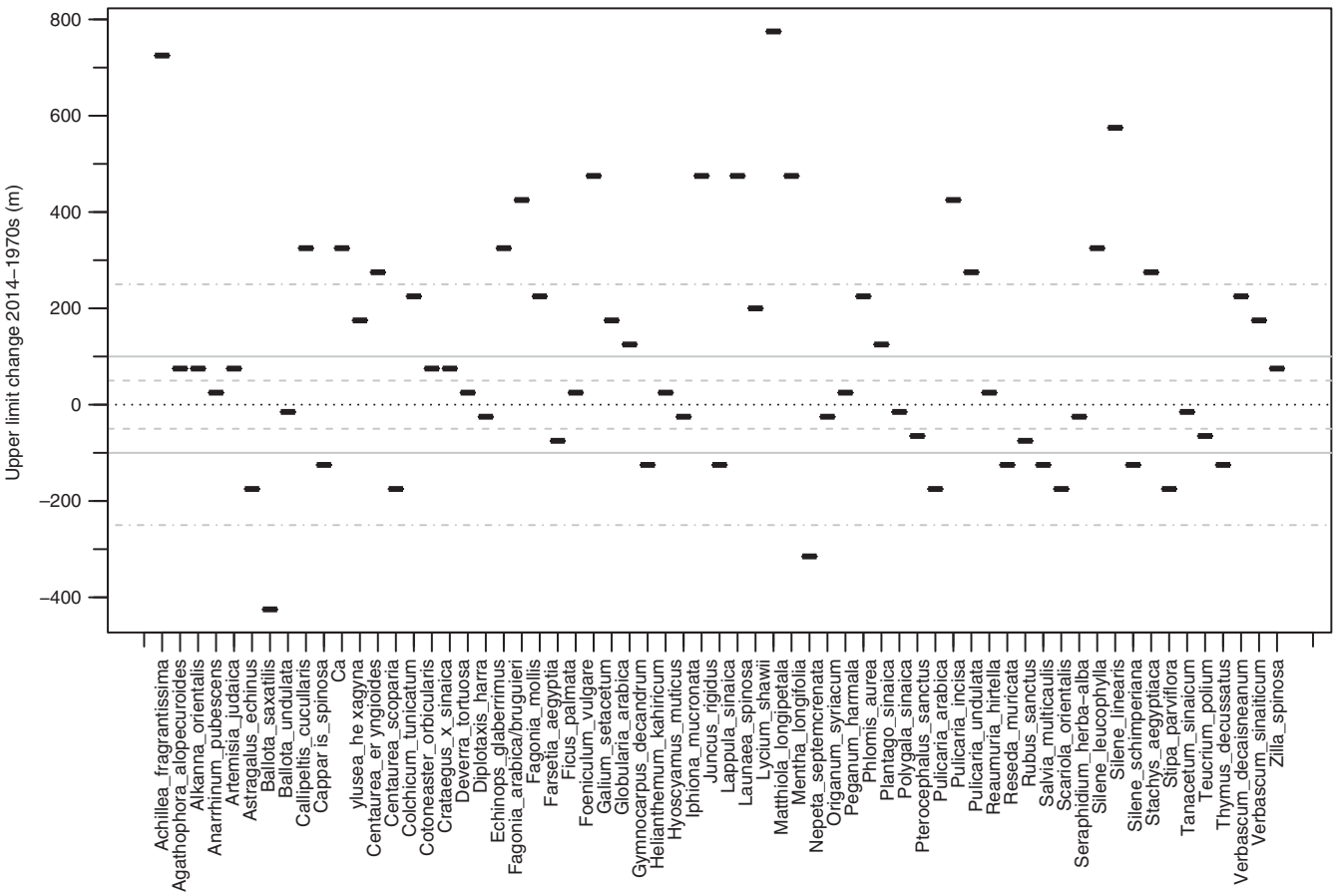

FIGURE 3 Difference in upper altitude limit for each plant species between the 1970s and 2014

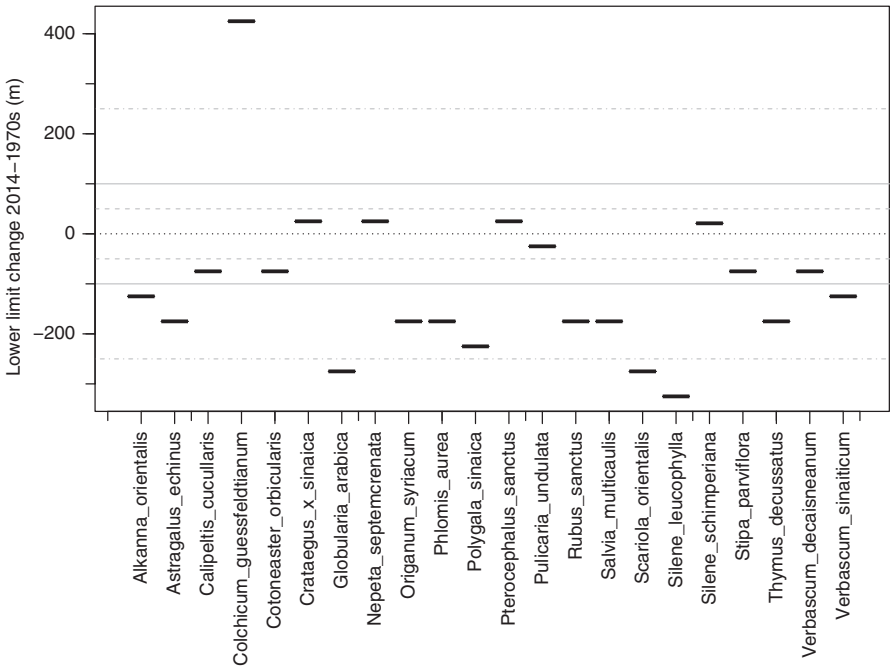

FIGURE 4 Difference in lower altitude limit for each plant species between the 1970s and 2014

those of the 1970s, with a much steeper slope for perennials (0.70) than annuals (0.29; $F_{1,59} = 4.49$, $p = 0.038$).

Analysis of only the perennial species showed significantly higher mean upper altitudinal limits in 2014 (mean: 2,220.8 ± 307.3 m) than in the 1970s (mean: 2,148.9 ± 342.6 m; paired $t = 2.45$, $df = 52$, $p = 0.018$). There was no evidence of a majority of perennial species increasing their upper limits (31/54; binomial test $p = 0.17$), even among those that differed by >100 m (20/32; binomial test $p = 0.12$). However, for species that differed by >250 m, a significantly larger number moved up-slope (10/12; binomial test $p = 0.02$).

The subset of only shrubs and trees also showed significantly higher mean upper limits (present mean: 2,219.1 ± 311.2 m, past mean: 2,139.5 ± 353.3 m; paired $t = 2.30$, $df = 36$, $p = 0.027$). Again there was no preponderance of increased upper limits among all species (21/38; binomial test $p = 0.31$) or those that differed by > 100 m (15/22; binomial test $p = 0.07$). Again, however, among species that differed by > 250 m, there was a preponderance of up-slope movement (7/8; binomial test $p = 0.04$).

The mean lower altitudinal limits of perennials moved significantly downwards in 2014 compared to the 1970s (present mean: 1,574.8 ± 162.9 m, past mean: 1,676.2 ± 166.3 m; paired $t = 2.92$, $df = 19$, $p = 0.009$). As with all plant species, a significantly larger number of species moved their lower limit downwards (16/21; binomial test $p = 0.01$), even among those that differed by >100 m (12/13; binomial test $p = 0.002$). The mean lower limits of shrubs and trees also shifted significantly downwards in the 2014 data (1,585.7 ± 145.7 m) than in the 1970s (1,725.0 ± 171.8 m; paired $t = 5.27$, $df = 12$, $p = 0.0002$). Again a significantly larger number of species moved down-slope (14/16; binomial test $p = 0.006$) and this was particularly the case for species that differed by >100 m (9/9; binomial test $p = 0.002$).

4 | DISCUSSION

4.1 | Patterns of diversity in the new data

The three Hill's number diversity indices provide greater insight than a single measure (Chao et al., 2012), with higher-order measures emphasizing more dominant species. Each index exhibited a different pattern of diversity with altitude. Species richness (^{0}D) was largest at high altitudes, with low richness found at low to mid-altitudes. This pattern contrasts with more humid mountain systems, where plant species richness typically peaks at low to mid-altitudes (Poulos, Taylor, & Beaty, 2007; Vetaas & Grytnes, 2002). The refugial nature of South Sinai's high mountains may explain the discrepancy in the pattern of species richness. Favourable climatic conditions, primarily increased availability and retention of moisture (Moustafa & Klopatek 1995; Moustafa & Zaghloul, 1996), at higher altitudes support increased richness than the comparative extremes of temperature and water stress encountered at mid- to low altitudes. While the temperate flora has largely been lost from much of low-altitude Sinai, in the mountain region of St Katherine remnant species remain only at higher altitudes, leading to a pattern of increasing species richness with increasing altitude (Moustafa, Zaghloul, El_Wahab, & Shaker, 2001). The Hill's number ^{1}D (number of typical common species) was highest at the lower altitudes sampled, decreasing at higher areas, whilst ^{2}D (number of very abundant species) increases with altitude. These patterns suggest that higher-altitude communities are dominated to a greater extent by a few abundant species. The joint interpretation of the patterns of all three diversity indices is that species richness increases with altitude, most likely due to more favourable climatic conditions of lower temperatures and greater moisture on mountain peaks and, although richer, communities become more

uneven at higher altitudes, with a few species showing increasing levels of dominance. The endemic species recorded in this study peaked in density at generally high altitudes and around mountain peaks, as in other studies in arid landscapes (Noroozi, Pauli, Grabherr, & Breckle, 2011) and more widely (Essl et al., 2009; Vetaas & Grytnes, 2002), although glaciation history is often also important in more northern studies.

4.2 | Range shifts since the 1970s

We have found clear evidence of temporal altitudinal range shifts in South Sinai's high-mountain flora, although species showing shifts of <100 m may be artefacts of the differing methodologies of the 1970s and 2014 studies, using different resolutions and elevation intervals for vegetation recording. Species with larger range shifts, however, showed an obvious pattern of up-slope movement of the upper limit, but also down-slope movement of the lower limit.

There have certainly been globally reported trends towards upwards shifts in range limits and changing community assemblages on mountain peaks, often attributed to climate change (Gottfried et al., 2012; Matteodo et al., 2013; McCain & Colwell, 2011). Indeed climate change is expected to be the main cause of range shifts, especially when considering both core components: temperature and precipitation. Nevertheless, wider consequences of climate change, including changes in water balance (Crimmins, Dobrowski, Greenberg, Abatzoglou, & Mynsberge, 2011), the area of bare soil surface (Walther et al., 2002) and elevated atmospheric carbon dioxide levels (Wayne, Reekie, & Bazzaz, 1998) can all influence range shifts in plants, albeit probably of lesser importance. In the case of South Sinai, unfortunately we do not have reliable local long-term site-specific climatic and environmental information. Coupled with high levels of small-scale variability in microhabitat conditions (Moustafa & Klopatek, 1995; Moustafa & Zaghloul, 1996) means that accurately determining causes for the observed range shifts is beyond the scope of this study. No good data on long-term precipitation in the South Sinai mountains exist. It is therefore difficult conclusively to attribute downward shifts of lower limits to increased precipitation. Donat et al. (2014) suggest "a slight wetting trend" across the Arab region since the 1970s. However this must be viewed in light of high site-specificity in precipitation and moisture availability in the South Sinai mountains, as noted by Moustafa and Zaghloul (1996).

During the period 1971–2000 Egypt as a whole showed overall mean annual temperature increases of 0.62°C per decade (Domroes & El-Tantawi, 2005), which greatly exceeds the global trend of 0.17°C per decade (IPCC 2001). Measures of precipitation across the wider Middle East and North Africa show increasing spatial and temporal variability (Zhang et al., 2005) but little evidence of significant changes in average values in Egypt (Donat et al., 2014).

Overgrazing by livestock has been suggested to be a determinant of vegetation diversity and range, including in the South Sinai mountains (Moustafa, 2001), but as with grazing by indigenous peoples worldwide (Davis, 2016), these are interpretations with little if any empirical evidence (see Gilbert, 2013 for full discussion). Numbers of grazing livestock and flock sizes have decreased substantially since the 1960s (Gilbert, 2013; Perevolotsky, Perevolotsky, & Noy-Meir, 1989), and hence it is possible that relaxed grazing pressure has permitted down-slope movement of plant range limits. However, the bulk of livestock flock size decreases occurred before the date of the 1974–1976 surveys (Perevolotsky et al., 1989), with average flock sizes changing from 78 pre-1968 to ~13 in the 1970s, ten in 1982, and seven to eight now (Gilbert, 2013). Rashad et al. (2002) found the majority of grazing occurred in an altitudinal band between 1,500 and 1,800 m. Only one species (*Rubus sanctus*) in our data set has its upper limit within this grazing zone, and this was stationary between the 1970s and 2014. Thus we do not believe that grazing has affected the upper altitudinal limits. Of the lower limits recorded in our data set from the 1970s, 17 of the 22 species fell within this altitudinal grazing zone, but only eight of these showed down-slope movement between the 1970s and 2014 (see Table 1 for detail). Therefore, whilst changes in grazing intensity *may* have affected down-slope range shifts, we suggest that climatic change explains the observed upward range shifts better.

Here, in this arid mountain system, we have documented what we think is the first record of significant down-slope shifts of plant lower-altitudinal limits outside Europe. Despite the less-than-ideal quality of the historical data, mean upper limits have increased while lower limits have decreased since the 1970s, leading to a divergent pattern of mean altitude limits. When considering the upper and lower altitudinal limits of individual species, we found heterogeneity in the joint responses, with no clear dominant pattern. One must bear in mind that these species are a subset of the selected group of high-mountain species that may not be representative of all the species present in that environment.

We now know that there have been significant upward shifts in the upper altitudinal limits of South Sinai plant species since the 1970s. Our data are limited to those species with lower limits within the sampled range, but a significantly large proportion show expansions of the altitudinal ranges, suggesting that, at least for now, range contractions are not affecting the majority of high-mountain species. However, the Sinai endemic *Silene schimperiana* has contracted in altitudinal range. The risk imposed by contracting ranges and habitat loss would therefore be best considered on a case-by-case basis with regard to Sinai's endemic and rare species. No plant extinctions have been recorded for South Sinai, at least within the last 30 yrs, although some are very close to extinction (e.g., *Primula boveana*: Omar, 2014; Jimenez, Mansour, Keller, & Conti, 2014). However this does not mean that shifts in altitudinal limits are not a cause for concern. Modelling of plant ranges under climate change has indicated lags in population dynamics leading to extinction debts (Dullinger et al., 2012). The isolated, refugial nature of South Sinai's plant communities leaves them vulnerable to extinction from a number of ecological factors, not limited to climate warming. Whilst we cannot conclusively state that observed shifts in altitudinal limits constitute 'fingerprints' of climate warming, they do point to ecological change posing potential ecological and conservation issues for the future.

In this study we have presented the first recorded instance of contemporary altitudinal limit shifts in Middle Eastern mountain flora. The fine-scale variability of environmental and ecological factors within the South Sinai mountain ecosystem highlights the necessity of ecological monitoring, and makes a case for increasing the comprehensiveness and quality of the region's environmental monitoring programmes. Our GPS-marked survey quadrats (Appendix S1: Table S2) will provide a baseline for future fine-scale monitoring. We also stress how important it is to consider both upper and lower altitudinal limits to obtain an accurate indication of overall altitudinal range changes. We need to focus on lower limits to understand better the ecological drivers and dynamics underlying heterogeneous responses at the range limits.

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REFERENCES

Arbel, O., & Shmida, A. (1979). *The vegetation of the high mountains of South Sinai*. Tel Aviv, IL: Society for the Protection of Nature, 67 pp. [in Hebrew].

Boulos, L. (1999-2005). *The Flora of Egypt*. Cairo, Egypt: Al Hadara Publishing.

Chao, A., Chiu, C. H., & Hsieh, T. C. (2012). Proposing a resolution to debates on diversity partitioning. *Ecology*, *93*, 2037–2051. https://doi.org/10.1890/11-1817.1

Chen, I. C., Hill, J. K., Ohlemüller, R., Roy, D. B., & Thomas, C. D. (2011). Rapid range shifts of species associated with high levels of climate warming. *Science*, *333*, 1024–1026. https://doi.org/10.1126/science.1206432

Crimmins, S. M., Dobrowski, S. Z., Greenberg, J. A., Abatzoglou, J. T., & Mynsberge, A. R. (2011). Changes in climatic water balance drive downhill shifts in plant species' optimum elevations. *Science*, *331*, 324–327. https://doi.org/10.1126/science.1199040

Davis, D. K. (2016). *The arid lands: History, power, knowledge*. Cambridge, MA: MIT Press.

Dirnböck, T., Essl, F., & Rabitsch, W. (2011). Disproportional risk for habitat loss of high-altitude endemic species under climate change. *Global Change Biology*, *17*, 990–996. https://doi.org/10.1111/j.1365-2486.2010.02266.x

Domroes, M., & El-Tantawi, A. (2005). Recent temporal and spatial temperature changes in Egypt. *International Journal of Climatology*, *25*, 51–63. https://doi.org/10.1002/(ISSN)1097-0088

Donat, M. G., Peterson, T. C., Brunet, M., King, A. D., Almazroui, M., Kolli, R. K., … Al Shekali, M. N. (2014). Changes in extreme temperature and precipitation in the Arab region: Long-term trends and variability related to ENSO and NAO. *International Journal of Climatology*, *34*, 581–592. https://doi.org/10.1002/joc.3707

Dullinger, S., Gattringer, A., Thuiller, W., Moser, D., Zimmermann, N. E., Guisan, A., … Hülber, K. (2012). Extinction debt of high-mountain plants under twenty-first-century climate change. *Nature Climate Change*, *2*, 619–622. https://doi.org/10.1038/nclimate1514

Essl, F., Staudinger, M., Stöhr, O., Schratt-Ehrendorfer, L., Rabitsch, W., & Niklfeld, H. (2009). Distribution patterns, range size and niche breadth of Austrian endemic plants. *Biological Conservation*, *142*, 2547–2558. https://doi.org/10.1016/j.biocon.2009.05.027

Foden, W., Midgley, G. F., Hughes, G., Bond, W. J., Thuller, W., Hoffman, M. T., & Hannah, I. (2007). A changing climate is eroding the geographical range of the Namib Desert tree *Aloe* through population declines and dispersal lags. *Diversity & Distributions*, *13*, 645–653. https://doi.org/10.1111/j.1472-4642.2007.00391.x

Gilbert, H. (2013). 'Bedouin overgrazing' and conservation politics: Challenging ideas of pastoral destruction in South Sinai. *Biological Conservation*, *160*, 59–69. https://doi.org/10.1016/j.biocon.2012.12.022

Gottfried, M., Pauli, H., Futschik, A., Akhalkasti, M., Barancok, P., Alonso, J. L. B., … Grabherr, G. (2012). Continent-wide response of mountain vegetation to climate change. *Nature Climate Change*, *2*, 111–115. https://doi.org/10.1038/nclimate1329

Grainger, J., & Gilbert, F. (2008). Around the sacred mountain: The St Katherine Protectorate in South Sinai, Egypt. In J. M. Mallarach (Ed.), *Values of protected landscapes and seascapes: Protected landscapes and cultural and spiritual values* (pp. 21–37). Gland, Switzerland: IUCN.

Grytnes, J.-A., Kapfer, J., Jurasinski, G., Birks, H. H., Henriksen, H., Klanderud, K., … Birks, J. B. (2014). Identifying the driving factors behind observed elevational range shifts on European mountains. *Global Ecology & Biogeography*, *23*, 876–884. https://doi.org/10.1111/geb.12170

Hampe, A., & Petit, R. J. (2005). Conserving biodiversity under climate change: The rear edge matters. *Ecology Letters*, *8*, 461–467. https://doi.org/10.1111/j.1461-0248.2005.00739.x

Hewitt, G. M. (2004). Genetic consequences of climatic oscillations in the Quaternary. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, *359*, 183–195. https://doi.org/10.1098/rstb.2003.1388

Hill, M. O. (1973). Diversity and evenness: A unifying notation and its consequences. *Ecology*, *54*, 427–432. https://doi.org/10.2307/1934352

IPCC (2001). *Climate change 2001*. Geneva, Switzerland: The Intergovernmental Panel on Climate Change 3rd assessment report.

IUCN (1994). *Centres for plant diversity: A guide and strategy for their conservation*. Cambridge, UK: IUCN.

Jimenez, A., Mansour, H., Keller, B., & Conti, E. (2014). Low genetic diversity and high levels of inbreeding in the Sinai primrose (*Primula boveana*), a species on the brink of extinction. *Plant Systematics & Evolution*, *300*, 1199–1208. https://doi.org/10.1007/s00606-013-0955-y

Jump, A. S., Huang, T. J., & Chou, C. H. (2012). Rapid altitudinal migration of mountain plants in Taiwan and its implications for high altitude biodiversity. *Ecography*, *35*, 204–210. https://doi.org/10.1111/j.1600-0587.2011.06984.x

Klanderud, K., & Birks, H. J. B. (2003). Recent increases in species richness and shifts in altitudinal distributions of Norwegian mountain plants. *Holocene*, *13*, 1–6. https://doi.org/10.1191/0959683603hl589ft

Körner, C. (2003). *Alpine plant life: Functional plant ecology of high mountain ecosystems; with 47 tables*. Berlin, Germany: Springer. https://doi.org/10.1007/978-3-642-18970-8

Lenoir, J., & Svenning, J.-C. (2015). Climate-related range shifts – a global multidimensional synthesis and new research directions. *Ecography*, *38*, 15–28. https://doi.org/10.1111/ecog.00967

Matteodo, M., Wipf, S., Stöckli, V., Rixen, C., & Vittoz, P. (2013). Elevation gradient of successful plant triats for colonizing alpine summits under climate change. *Environmental Research Letters*, *8*, 1–10.

McCain, C. M., & Colwell, R. K. (2011). Assessing the threat to montane biodiversity from discordant shifts in temperature and precipitation in a changing climate. *Ecology Letters*, *14*, 1236–1245. https://doi.org/10.1111/j.1461-0248.2011.01695.x

Moustafa, A. R. A. (2001). Impact of grazing intensity and human disturbance on the population dynamics of *Alkanna orientalis* growing in Saint Catherine, South Sinai, Egypt. *Pakistan Journal of Biological Science*, *4*, 1020–1025.

Moustafa, A. R. A., & Klopatek, J. M. (1995). Vegetation and landforms of the Saint Catherine area, southern Sinai, Egypt. *Journal of Arid Environments*, *30*, 385–395. https://doi.org/10.1006/jare.1995.0033

Moustafa, A. R. A., & Zaghloul, M. S. (1996). Environment and vegetation in the montane Saint Catherine area, south Sinai, Egypt. *Journal of Arid Environments*, *34*, 331–349. https://doi.org/10.1006/jare.1996.0114

Moustafa, A. R. A., Zaghloul, M. S., El_Wahab, R.H.A., & Shaker, M. (2001). Evaluation of plant diversity and endemism in Saint Catherine Protectorate, South Sinai, Egypt. *Egyptian Journal of Botany*, *41*, 121–139.

Nagy, L., & Grabherr, G. (2009). *The biology of alpine habitats*. Oxford, UK: Oxford University Press. online

Noroozi, J., Pauli, H., Grabherr, G., & Breckle, S. W. (2011). The subnival–nival vascular plant species of Iran: A unique high-mountain flora and its threat from climate warming. *Biodiversity & Conservation*, *20*, 1319–1338. https://doi.org/10.1007/s10531-011-0029-9

Omar, K. (2014). Assessing the conservation status of the Sinai Primrose (*Primula boveana*). *Middle-East Journal of Scientific Research*, *21*, 1027–1036.

Pauli, H., Gottfried, M., Reiter, K., Klettner, C., & Grabherr, G. (2007). Signals of range expansions and contractions of vascular plants in the high Alps: Observations (1994-2004) at the GLORIA master site Schrankogel, Tyrol, Austria. *Global Change Biology*, *13*, 147–156. https://doi.org/10.1111/j.1365-2486.2006.01282.x

Perevolotsky, A., Perevolotsky, A., & Noy-Meir, I. (1989). Environmental adaptation and economic change in a pastoral mountain society: The case of the Jabaliyah Bedouin of the Mt. Sinai region. *Mountain Research & Development*, *9*, 153–164. https://doi.org/10.2307/3673478

Poulos, H. M., Taylor, A. H., & Beaty, R. M. (2007). Environmental controls on dominance and diversity of woody plant species in a Madrean, Sky Island ecosystem, Arizona, USA. *Plant Ecology*, *193*, 15–30. https://doi.org/10.1007/s11258-006-9245-x

Rapacciuolo, G., Maher, S. P., Schneider, A. C., Hammond, T. T., Jabis, M. D., Walsh, R. E., … Beissinger, S. R. (2014). Beyond a warming fingerprint: Individualistic biogeographic responses to heterogeneous climate change in California. *Global Change Biology*, *20*, 2841–2855. https://doi.org/10.1111/gcb.12638

Rashad, S., Basset, Y., Hemeed, M., Alqamy, H., & Wacher, T. (2002). *Grazing patterns in the high-altitude mountains around St Katherine town*. Cairo, Egypt: EEAA/St Katherine Protectorate.

Shmida, A. (1977). Remarks on the palaeo-climates of Sinai based on the distribution patterns of relict plants: Prehistoric investigation in Gebel Maghara, Northern Sinai. *Kedem*, *6*, 36–54.

Stöckl, V., Wipf, S., Nilsson, C., & Rixen, C. (2011). Using historical plant surveys to track biodiversity on mountain summits. *Plant Ecology & Diversity*, *4*, 415–425. https://doi.org/10.1080/17550874.2011.651504

Van de Ven, C. M., Weiss, S. B., & Ernst, W. G. (2007). Plant species distributions under present conditions and forecasted for warmer climates in an arid mountain range. *Earth Interactions*, *11*, 1–33.

Vetaas, O. R., & Grytnes, J. A. (2002). Distribution of vascular plant species richness and endemic richness along the Himalayan elevation gradient in Nepal. *Global Ecology & Biogeography*, *11*, 291–301. https://doi.org/10.1046/j.1466-822X.2002.00297.x

Walther, G. R., Beißner, S., & Burga, C. A. (2005). Trends in the upward shift of alpine plants. *Journal of Vegetation Science*, *16*, 541–548. https://doi.org/10.1111/j.1654-1103.2005.tb02394.x

Walther, G. R., Post, E., Convey, P., Menzel, A., Parmesan, C., Beebee, T. J. C., … Bairlein, F. (2002). Ecological responses to recent climate change. *Nature*, *416*, 389–395. https://doi.org/10.1038/416389a

Wayne, P. M., Reekie, E. G., & Bazzaz, F. A. (1998). Elevated CO_2 ameliorates birch response to high temperature and frost stress: Implications for modeling climate-induced geographic range shifts. *Oecologia*, *114*, 335–342. https://doi.org/10.1007/s004420050455

Wickham, H. (2009). *ggplot2: Elegant graphics for data analysis*. New York, NY: Springer. https://doi.org/10.1007/978-0-387-98141-3

Wilson, R. J., Gutiérrez, D., Gutiérrez, J., Martínez, D., Agudo, R., & Monserrat, V. J. (2005). Changes to the elevational limits and extent of species ranges associated with climate change. *Ecology Letters*, *8*, 1138–1146. https://doi.org/10.1111/j.1461-0248.2005.00824.x

Wipf, S., Stöckli, V., Herz, K., & Rixen, C. (2013). The oldest monitoring site of the Alps revisited: Accelerated increase in plant species richness on Piz Linard summit since 1835. *Plant Ecology & Diversity*, *6*, 447–455. https://doi.org/10.1080/17550874.2013.764943

Zahran, M. A., & Willis, A. J. (2008). *The vegetation of Egypt (vol. 2)*. London, UK: Springer.

Zalat, S., Gilbert, F., Fadel, H., El-Hawagry, M. S., Saleh, M., Kamel, S., & Gilbert, J. (2009). Biological explorations of Sinai: Flora and fauna of Wadi Isla and Hebran, St Katherine Protectorate, Egypt. *Egyptian Journal of Natural History*, *5*, 6–15.

Zhang, X., Aguilar, E., Sensoy, S., Melkonyan, H., Tagiyeva, U., Ahmed, N., … Albert, P. (2005). Trends in Middle East climate extreme indices from 1950 to 2003. *Journal of Geophysical Research: Atmospheres*, *110*, 1–12.

SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

Table S1 Altitudinal distributions of each species from 2014 data

Table S2 Summary data on the occupancy and abundance of each species from the 2014 surveys. There were a total of 283 quadrats in 36 sites in the study

Table S3 Gps locations (decimal degrees) of 100 m^2 quadrats (centre point ± 3 m) along with site information and hill's number diversity indices for each quadrat sampled in 2014

Table S4 Site descriptions and photos for 100 m^2 quadrats sampled in 2014

Table S5 Species abundance for quadrats surveyed in 2014

Figure S1 Abundance-weighted altitudinal distributions of each species from 2014 data

Figure S2 Altitudinal distributions of each species from 2014 data

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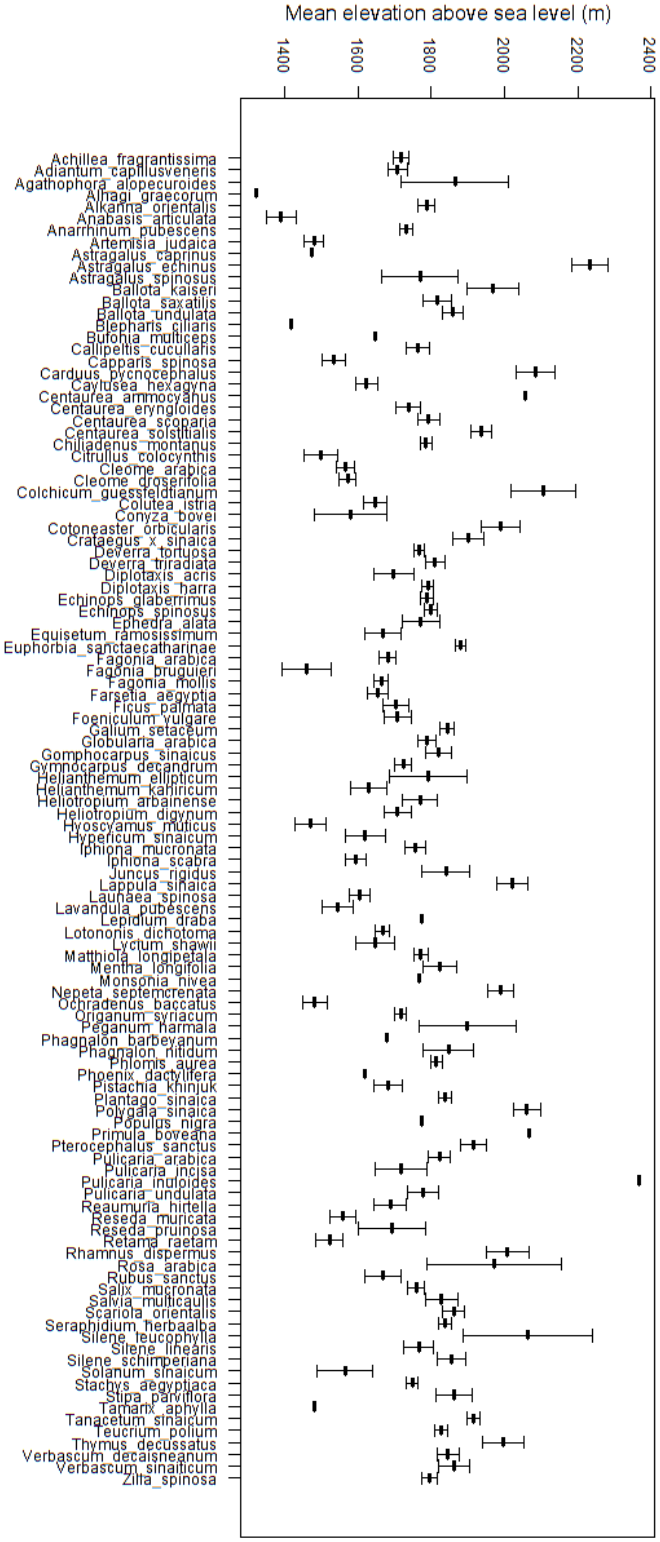
Supplementary Information

Figure S1

Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. Journal of Vegetation Science. Appendix Figure S1. Abundance-weighted altitudinal distributions of each species from 2014 data. The weighting works by each individual plant observed in each quadrat contributing an altitude to the calculation of the mean and se.



Supplementary Information

Figure S2

Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. Journal of Vegetation Science. Appendix Figure S2. Altitudinal distributions of each species from 2014 data.

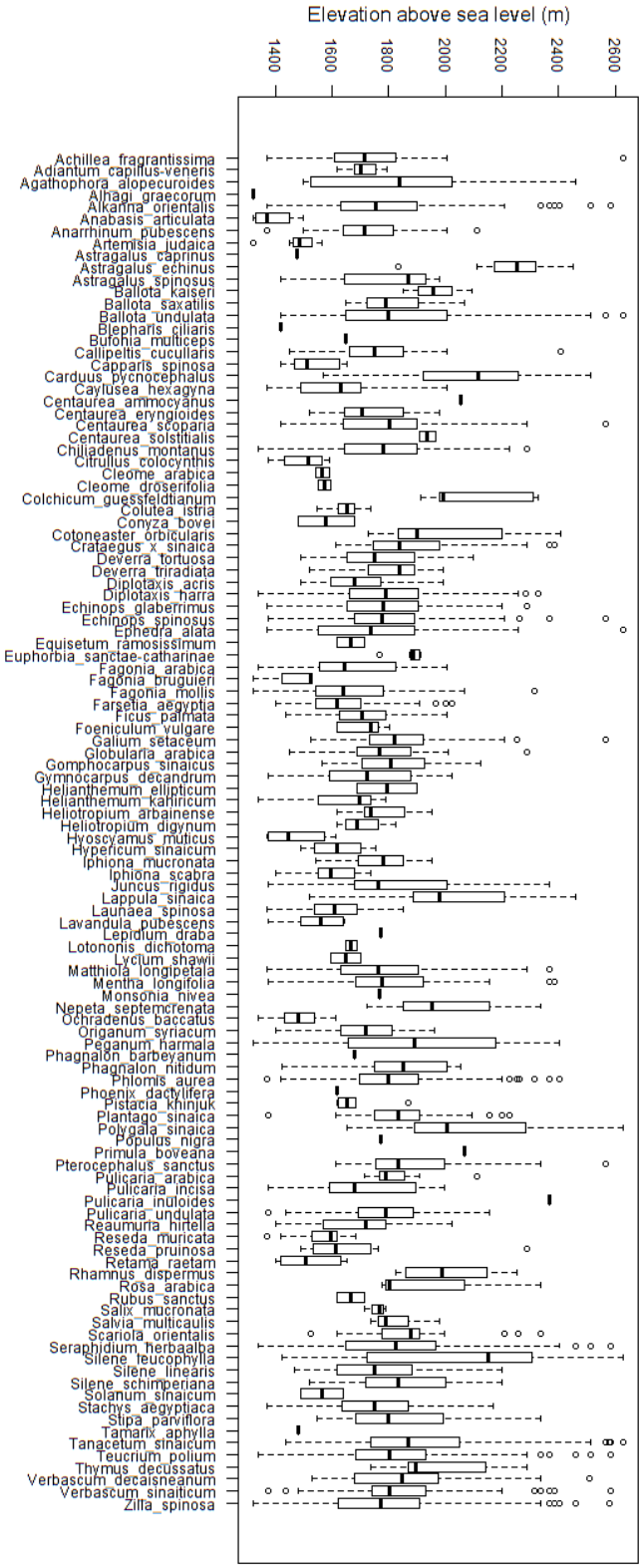


Table S1. Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. *Journal of Vegetation Science* . Appendix Table S1. 1970s Sinai vegetation survey dataset, from Arbel & Shmida (1979)

Species name - hebrew	Species name - Binomial	lower border - rare (meters above sea level)	lower border - common (meters above sea level)	upper border - common (meters above sea level)	upper border - rare (meters above sea level)	Habitat association	Frequency of occurence in typical habitat - very rare < rare < common < frequent < very frequent
אבילאה ריחנית	Achillea fragrantissima		1001	1900		wide flat gravel wadis	common
אבילאה ערבתית	Achillea santolina		1800	1800		orchards	one finding
שערות שולמית	Adiantum capillus-veneris		1001	2000		wet habitats	common
בן חיטה קטוע	Aegilops speltoides		1900	1900		orchards	one fining
מלחנית הערבות	Agathophora alopecuroides		1001	2400		wind beaten weathered slopes	very frequent in patches
חדשפה מצוי	Ajuga chamaepitys		1700	2640		rock cracks	rare
חוטמית משורטטת	Alcea striata		1800	1900		plow land	frequent in patches
אלקנה מזרחית	Alkanna orientalis		1500	2500		wide flat gravel wadis	frequent
שום דקני=ערבתי	Allium decaisnei		2000	2000		weathered slopes	very rare
אליסון דמשקאי	Alyssum damascenum		1400	1600		orchards	very rare
אליסון מלול	Alyssum marginatum		1600	2400		slopes	rare
צחנן מבאיש	Anagyris foetida		1700	1700		orchards	one finding
חסרף שעיר	Anarrhinum pubescens		1601	2100		rock cracks and weathered slopes underneath rocky plateau	rare
לשון-פר מדברית	Anchusa milleri		1001	2200		wide flat gravel wadis, weathered slopes	rare
שלוחית שעירה	Andrachne aspera		1001	1900		weathered slopes, shade of large rocks (>1m)	common
תודרנית סיני	Arabidopsis kneuckeri		1900	210		rock cracks	very rare
ארביס אושה	Arabis aucheri		1400	1900		slopes	rare
ארנרית הסלעים	Arnaria deflexa		1500	2600		shade of rocks and large rocks in the wadi centre	common
לענת יהודה	Artemisia judaica		1001	1500	1800	wide flat gravel wadis	frequent in area boundaries
לענת המדבר	Artemisia sieberi	900	1300	2600		weathered slopes	very freqent
אספרג ארוך עלים	Asparagus horridus		1001	2100		rock cracks	rare
חספסת שרועה	Asperugo procumbens		1600	1800		orchards	common
אספלנוס שחור	Asplenium onoptreis		2000	200		under a bolder in wadi ibni	one finding
קדד מצליב	Astragalus asterias					wadis	very rare
קדד הסיף	Astragalus dactylocarpus		1500	1800		wide flat wadis with gravel	rare
קדד קיפודי	Astragalus echinus	1800	2000	2600		weathered slopes, beneath rocky plateau	common
קדד פרזני	Astragalus fresenii	1650	1800	2500		weathered slopes	common
קדד לביד	Astragalus fruticosus		1001	1800		wadis	very rare
קדד משולחף	Astragalus spinosus		1001	1600	1800	weathered slopes	common
קדד קטבי	Astragalus tribuloides		1001	2400		slopes	common
גפוף קוצני	Atraphaxis spinosa		1900	2640		weathered slopes	very frequent
מלוח מלבין	Atriplex leucoclada		1001	2600		weathered slopes	rare
שבולת שועל ערבתית	Avena weistii		1800	1900		wadis, slopes	rare
בלוטת סלעים	Ballota saxatills		1800	2500		rocky wadis, shade of large rocks in channel	rare
בלוטה גלונית	Ballota undulata		1001	2640		rock cracks	frequent

שרעול אדומי	Bituminaria flaccida		1600	1800	1900	rock cracks and shaded wadis	rare
בואסירה מצויצת	Boissiera squarrosa		1600	2400		weathered slopes	frequent
בולנתוס שעיר	Bolanthus hirsutus		1800	2640		rock cracks	frequent
עקצר מצוי	Brachypodium distachyum		1600	1900		orchard	very rare
ברומית רבת מלענים	Bromus danthoniae		1800	1900		orchards	very rare
ברומית סיני	Bromus sinaicus		1600	2500		weathered slopes	very frequent
בופוניה סוככית	Bufonia multiceps		1300	2640		weathered slopes	common
צלע שור קיפחת	Bupleurum nodiflorum	1600	2000	2640		gorges with very steep walls	frequent
צפרני חתול שלוש בנפות	Calendula tripterocarpa			1800		slopes	very rare
מגנונית	Callipeltis		1500	2100		weathered slopes	very rare
פעמונית נאה=המדבר	Campanula dulcis	1600	1800	2100	2300	shaded rock cracks	rare
צלף סחוסי	Capparis sinaica		1001	1300	1600	cliff in wadi	common in area boundaries
צלף קוצני	Capparis spinosa		1001	1800		rock cracks, cliff	rare
קרדרית (מצויה)	Cardaria draba		1800	1800		wadis, plow land	frequent in patches
קדדה (=קרדה) רבת ראשים	Carduus argentatus			1800		near orchards	rare
ששן מאפיר	Caylusea hexagyna		1001	1700		wide flat wadis with gravel	common in area boundaries
דרדר חרחבינה	Centaurea erryngioides		1001	1800	2100	rock cracks	common
בדרדר מכבדי = דרדר המכבד	Centaurea scoparia		1200	2300		rock cracks	common
דרדר סיני	Centaurea sinaica		1500	200		dry slopes	very rare
ערכז (=ערבז) יפה	Centaurium tenuiflorum		1001	2200		wet habitats, mobile rocks	rare
קרנונית מוקרנת (=מדוקרנת)	Cerastium dichotomum		1500	2400		slopes	very rare
כף אווז האשפות	Chenopodium murale		1001	2600		orchards	very rare
כף-אווז שרועה	Chenopodium murale		1001	2600		orchards	very rare
באשן תלת-עורקי=תמים	Cleoma arabica		1001	1500		wide wadis	common in area boundaries
תריסנית מלולה	Clypeola jonthlaspi		1500	2400		slopes	very rare
סתוונית סיני	Colchicum guessfeldtianum		1500	2500		rock cracks, slopes, wide flat wadis with gravel	rare
קרקש צהוב	Colutea istria			1700		gorges with very steep walls	rare
חבלבל השדה	Convolvulus arvensis		1600	1800		plow land	very rare
שרברך הסלעים	Cosentinia vellea		1800	1800		shaded rocks	very rare
חבושית סיני	Cotoneaster orbicularis		1800	2200		gorges with very steap walls, narrow wadis with large rocks (>1m)	common
עזרר סיני	Crataegus sinaicus		1600	2300		wadis with large rocks (>1m)	frequent
נינסנית (=ניסנית) דו-קרנית	Crepis sancta		2100	2400		weathered slopes	common
צלבית "קתרינה"	Crucianella ciliata		1900	2600		gorges with very steep walls, slopes	rare
כשות	Cuscuta		1900	1900		orchards	very rare
יבלית מצויה	Cynodon dactylon		1001	1800		orchards, road sides and inhabitted places	common
דסקורניה מנוצה	Descurainia sophia		1900	1900			rare
קזוח עקם	Deverrs tortuosa	1001	1200	2000		weathered slopes	common
טורים זיפניים	Diplotaxis harra		1001	2300		weathered slopes	common
טיון דביק	Dittrichia viscosa		1500	1500		wadi tlah (near abu sila), wet habitat	very rare
פלגית שלוש-אונות	Doellia bovei (=Blumea bovei)		1200	2100		wadis	rare
קפודן קרח	Echinops glaberimus	1001	1300	2300		rock crack, cliff	frequent
שרביטן הערבה	Ephedra ciliata		1800	2000		weathered slopes	frequent in patches
שרביטן גס	Ephedra pachyclada		1700	2100	2400	rock cracks	common
שבטבט ענף	Equisetum ramosissimum		1600	1800		wet habitats	very rare
מקור חסידה מלבין	Erodium oxyrhynchum		1001	2400		road sides, wide flat wadis with gravel	common
מקור חסידה מדברי	Erodium touchyanum		1001	1900		wide flat wadis with gravel	rare
בן חרדל מצוי	Eruca sativa		1700	1700		orchards	

חלבלוב ביצני	Euphorbia obovata		1600	2400		ridges of wide flat gravel wadis	very rare
חלבלוב קהירי	Euphorbia retusa		1001	1600		weathered slopes	common
פגוניה קטנת-פרחים	Fagonia bruguierei		1001	1700	2000	weathered slopes	rare
פגוניה רכה	Fagonia mollis		1001	1900		dry weathered slopes	frequent
פרסטית מצרית	Farsetia aegyptia		1001	1800		weathered slopes, rocks	rare
פיקוס בת-שיקמה	Ficus palmata	1001	1500	2100	2100	rock cracks, wide flat wadis with gravel	common
שמר פשוט	Foeniculum vulgare		1001	1800		wet habitats	frequent in patches
עשנן מצוי (=קטן)	Fumaria parviflora		1600	1900		orchard	very rare
זהבית אשונה	Gagea fibrosa		1900	2500		weathered slopes	very rare
דבקה דקיקה	Galium setaceum		1300	2100		slopes	rare
דבקת סיני	Galium sinaicum	1400	1600	2300		rock cracks	very frequent
דבקה חד-פרחית	Galium spurium		1500	2300		slopes, orchards	common
דבקה מגובששת=משולשת	Galium tricornutum		1800	1900		orchards, wet habitats	rare
פרגה ערבית	Glaucium arabicum		1600	1800		wide flat wadis with gravel	common
פרדה (=פרגה) עדינה	Glaucium elegans		1800	1900	2400	weathered slopes	rare
גלנית ערבית	Globularia arabica		1700	2100	2300	rock cracks	frequent in patches
ערטל מדברי	Gymnocarpos decander		1001	1900		weathered slopes, rocks, rock cracks	common
גפסנית ערבית	Gypsophila capillaris		1001	1600		weathered slopes	common
גפסנית דביקה	Gypsophila viscosa		1200	1800		wide flat wadis with gravel	rare
פיגמית מגובששת	Haplophyllum tuberculatum		1001	1600		wadis	rare
שמשון קהירי	Helianthemum kahiricum		1001	1900		rock cracks	rare
שמשון ליפי	Helianthemum lippii		1001	2000		shallow weathered areas on rocky plateau	frequent
שמשון המדבר	Helianthemum sancti-antonii		1500	1600		dry slopes	very rare
עוקץ-עקרב מדברי	Heliotropium arbainense		1001	1500		wide flat wadis with gravel, weathered slopes	common in area boundaries
עוקץ-עקרב פרסי=גלוני	Heliotropium bacciferum		1001	1500			
דרבנית(=דרכנית) שעירה	Herniaria hirsuta		1600	1600		road sides	very rare
סביון (=סכיכון) דביק	Holosteum glutinosum		1900	2640		weathered slopes	common
שכרון סיני	Hyoscyamus boveanus		1001	1600		wadis	common in area boundaries
זקנן שעיר	Hyparrhenia hirta		1001	2000		rocks with southern inclination	
מגלית סיני=הדרום	Hypecoum geslinii		1600	1900		slopes, wadis. Orchards	rare
פרע סיני	Hypericum sinaicum		1600	2100		mobile rocks	common
שיכרון פעוט	Hyscyamus pusillus		1001	1800		wide flat wadis with gravel	rare in patches
אפיונה מחודדת	Iphiona mucronata		1001	2000	2100	rock cracks	frequent
אסטיס קטן-פרי	Isalis microcarpa		1660	2400		wide flat wadis with gravel	common
בתלה הררית	Ixilition(?) tataricum		1001	2300		rock cracks	very frequent
סמר חופי=ערבי	Juncus arabicus		1001	1900		wet habitats	common
סמר אפרפר	Juncus inflexus		1900	1900		wet habitats	very rare
סמר המכבד	Juncus punctorius		1700	1900		wet habitats	very rare
בת-פשתנית מצרית = קיקסיה	Kickxia aegyptica		1001	1600		weathered slopes	rare
בת-פשתנית רתמית = קיקסית ס	Kickxia macilenta		1550	1900	2000	rock cracks	rare
חסה מזרחית	Lactuca orientalis		1800	2500		weathered slopes	common
חסת המצפן	Lactuca serriola		1900	1900		orchards	very rare
לפית סיני	Lappula sinaica		1400	2600		weathered slopes	frequent
לפית שכנית	Lappula spinocarpos		1001	2000		weathered slopes, ridges	frequent
בן ציצית טחבני	Lasiopogon muscoides	1400	1001	1600		wide flat wadis with gravel	common in patches
לוניאה שרועה	Launea nudicaulis		1001	1600	2600	weathered slopes, rock cracks	very rare
לוניאה קוצנית	Launea spinosa		1001	1400	1700	rock cracks	common in area boundaries
ליזרה נימית	Leysera leyseroides		1001	1700		wide wadis	very rare

פשתנית קטנת פרחים	Linaria simplex		1700	1700		slopes	very rare
לוטונית מדוקרנת	Lotononis platycarpa		1001	1700		slopes and wide wadis	common
אטד ערבי	Lycium shawii		1001	1500		weatered slopes	common in area boundaries
אזוב מצוי	Majorana syriaca		1600	2000	2200	narrow wadi with large rocks (>1m)	frequent
מלקלמיה אפריקאית	Malcolmia africana		1500	2000		weathered slopes, orchards	frequent
דבשית לבידה	Malica pannosa		1900	2600		gorges with very steap walls, weathered slopes	rare
חלמית מוזנחת	Malva neglecta		1001	1600		road sides and inhabited places	rare
מנתור ערבי	Matthiola arabica		1600	1600		weathered slopes	common
מנתור המדבר	Matthiola livida		1001	1600		weathered slopes	very rare
נענה קטנת-פרחים=עלים	Mentha longifolia ssp. Schimperi	800	1200	1900		wide flat wadis with gravel	common
הילל בינוני	Microparacarryum intermedium		1400	2600		weathered slopes	frequent
צללית מזרחית	Minuartia meyeri		1400	2400	2640	slopes	common
צללית נאה	Minuartia picta		1200			slopes	rare
זוטת סרבל	Miromeria serbaliana	1700	1900	2200	2600	rock cracks	common
זוטת סיני	Miromeria sinaica		1001	2100		rock cracks	rare
בהק צחור	Monsonia nivea		1001	1900		wadis	very rare
מורטיה מלבינה	Morettia canescens		1001	1600		wadis	rare
נפית סיני	Nepeta septemcrenata	1600	1700	2640		channels of rocky wadis	common
נונאה כוסנית (=ברסנית)	Nonea echioides = N. ventricosa		1500	1800		orchards	common
רכפתן מדברי	Ochradenus baccatus		1001	1500	1800	wadis	rare
חוחן מסופק	Onopordum ambiguum		1800	2500		weathered slopes	rare
פרג סיני	Papaver decaisnei		1600	2500		wide flat wadis with gravel, orchards	rare
הילל מקומט	Paracaryum rugulosum		1700	1900		weathered slopes	very rare
כתליה שעירה=זעירה	Parietaria alsimifolia		1001	1800		shade of large rocks (>1m) and rocks	common
אלמות סיני	Paronychia sinaica		1001	2640		rock cracks	common
שבר לבן	Peganum harmala		1001	2400		side of roads, inhabitted places	frequent
זיפנוצה מזרחי	Pennisetum orientale		1400	2100		rocky wadis and farshes	rare
חלביב רתמי	Periploca aphylla		1001	2000		rocks	very rare
צמרנית קרחת=מבריקה	Phagnalon schweinfurtii (?)		1500	2000		rock cracks	rare
שלהבית זהובה	Phlomis aurea		1550	2200		wadis with large rocks (>1m), weathered slopes beneath rocky plateau	very frequent
קנה מצוי	Phragmmites australis		1001	1600		wet habitats	rare
מורית (=מררית) כחולת זרעון	Picris cyanocarpa		1001	2400		weathered slopes	common
נשרן שעיר	Piptatherum holciforme		1900	2300		farsh, weathered slopes	rare
נשרן הדוחן	Piptatherum miliaceum	1001	1500	2300		rock cracks, weathered slopes	common
אלה פרסית	Pistacia khinjuk	1300	1400	2000	2200	rock cracks	common in patches
לחך סיני	Plantago sinaica		1500	2100	2300	rock steps and weathered slopes underneath rocky plateau	frequent
סיסנית סיני	Poa sinaica		2100	2600		weathered slopes, farsh	rare
עבדקן מצוי	Polypogon monspeliensis		1001	2100		wet habitats, mobile rocks	frequent
עבדקן הדורים	Polypogon viridis		1001	1800		wet habitats	rare
בבור-אביב סיני	Primula boveana		1800	2200		mobile rocks	rare (common in patches)
כנפן קוצני	Pteranthus dichotomus		1001	1700			one finding
נוציץ קדוש	Pterocephalus sanctus		1600	2640		gorges with very steep walls, slopes adjacent to rocky plateau, shade of large rocks (>1m)	common
פרעושית ערבית	Pulicaria arabica			2300		wet habitats, mobile rocks	common
פרעושית גלונית	Pulicaria incisa		1001	1550	2642	wide flat wadis with gravel	frequent in area boundries
פרעושית מסולסלת	Pulicaria undulata	1001	1400	1900		wide flat wadis with gravel	rare

אשליל שעיר	Reaumuria hirtella		1001	2000		slopes and rocks	rare
רכפה מגובששת	Reseda muricata		1001	1800	1900	weathered slopes	rare
אשחר דו-זרעי	Rhamnus disperma		1001	2200		rocky (unhung) wadis	rare
בן פרג סגול	Roemeria hybrida		1600	2400		slopes	common
ורד ערבי	Rosa arabica		1750	2300		narrow wadi with large rocks (>1m), wet habitat	rare
שושנתית משורטטת	Rosularia lineata		2000	2000		rock cracks, Mt. Sirbal	one finding
פטל קדוש	Rubus sanguineus	1001	1800	1600		wet habitats, Rubus Cravice in Wadi shalah/shalach	very rare
חומעה ורודה	Rumex cyprius		1001	1700		wide flat wadis with gravel	common in area boundries
סגרטיה אשחרית	Sageretia thea		1600	2300		rock cracks, shaded lands	rare
ערבה מחודדת	Salix acmophylla		1800	1800		wet habitats	rare
מרווה רחבת גביע	Salvia multicaulis		1900	2100		weathered slopes	rae
מרווה קוצנית	Salvia spinosa	1000	1600	2100		wadis	common
מסרק כוכבי	Scandix stellata		1500	1800		weathered slopes	rare
שסיע ערבי	Schismus arabicus		1400	2400		wadis, slopes	rare
אחיגומא משחיר	Schoenus nigricans		1700	1900		mobile rocks	rare
הרדופנין פעוט=נמוך	Scorzonera pusilla		2400	2400		weathered slopes, Mt. Katherine	one finding
הרדופנין אדומי	Scorzonera schweinfurthii		1900	2400		weathered slopes	common
אגמונית הכדורים	Scripus holoschoenum		1800	2400		wet habitats, farsh	common
לענית הלבנון	Scrophularia libanotica	1750	1850	2640		rock cracks	frequent
לענית מצויה	Scrophularia xanthoglossa		1500	2100		wadis, weatered slopes underneath rocky plateau	very rare
סביון הערבות	Senecio glaucus subsp. Coronopifolius		1800	1900		slopes	very rare
סביון פשוט	Senecio vulgaris		1600	1600			very rare
ציפורנית ערבית. מגוונת (?)	Silene arabica		1600	1900		slopes	rare
ציפורנית מחרטת	Silene conoidea		1600	1600		Wadi Tlah (near abu sila)	one finding
צפורנית לבנת עלים	Silene leucophylla		1750	2300		rock cracks	common
ציפורן הלבנון	Silene libanotica		2400	1500		weathered slopes	very rare
צפורנית דקיקה	Silene linearis		1001	1600	1300	wadis	common in area boundaries
ציפורנית שנונת כותרת	Silene odontopetala	1700	1900	2640		vertical cliffs	rare
צפרנית שימפר	Silene schimperiana	1200	1500	2300		weathered slopes beneath rocky plateau	common
ציפורן סיני	Silene sinaicus	1001	1300	2100		rock cracks	common
תודרה סיגית	Sisymbrium irio		1001	1900		orchards	rare
תודרה נאה	Sisymbrium septulatum		1600	2000		orchards	frequent
סולנום סיני	Solanum sinaicum		1001	1700	1900	wide flat wadis with gravel	common
אשבל מצרי	Stachys aegyptiaca		1001	1900	2100	rock cracks and very rocky slopes	frequent
מלעניאל הנוצות	Stipa arabica		1900	2640		weathered slopes	rare
מלעניאל קטן-פרחים	Stipa parviflora		1600	2500		rock cracks, weathered slopes	common
מלענן ריסני	Stipagrostis ciliata		1001	2000		rock cracks	rare
מלענן יפה-שער	Stipagrostis raddiana		1001	2000		rock cracks	rare
מלענת ארוכת מלענים	Taeniatherum caput-medusae		1800	2500		weathered slopes	very rare
אשל היאור	Tamarix nilotica		1001	1500		wide flat gravel wadis and wet habitats	common in patches in area boundaries
בן-חרצית גזור	Tanacetum sinaicum		1300	2640		weathered slopes near rocky plateau, under 1500m found in rocks	very frequent
טלפיון כדורי	Telephium sphaerospermum		1001	1700		slopes and rocks	very rare
טלפיון כדורי	Telephium sphaerospermum						
געדה מצויה	Teucrium capitatum		1001	2640		rocky wadis, weathered slopes at the foot of rock plateau	frequent

געדה מלבינה	Teucrium leucocladum	1001	1600	1800	weathered slopes	frequent in area boundaries
בת קורנית סיני	Thymus decussatus	1900	2400		farsh	frequent
זקן-תיש מדברי	Tragopogon collinus	1800	2400		wadis	rare
קטב מצוי	Tribulus terrestris	1001	1600		road sides	
גרגרנית כוכבנית	Trigonella stellata	1001	1700		wadis, road sides	common
שלוש-כנפות מדבריות	Tripteris vaillantii	1400	1700		rocky slopes	rare
סוף מצוי	Typha domingensis	1400	1600		wet habitats	rare
טבורית נטויה	Umbilicus intermedius	1001	2100		rock cracks	very rare
סבונית השדות	Vaccaria hispanica	1800	1800		near an orchard Wadi gibal	one finding
בוצינית=בוצין קטנת פרחים	Verbascum decaisneaum	1600	2300		rock cracks	frequent
בוצין שימבר	Verbascum schimperianum	1100	1800		wide flat garvel wadis	rare
בוצין סיני	Verbascum sinaiticum	1500	2400		wide flat garvel wadis	common
ברוניקת המים	Veronica anagallis-aquatica	1001	1700		wet habitats(,) in water	frequent
ברוניקה דו-אונתית	Veronica biloba	1900	2600		slopes	common
ברוניקה כפופת עוקץ	Veronica campylopoda	1900	1900			
ברוניקה לבנה	Veronica cymbalaria	1700	1900		orchards	very rare
בקיה מדורבנת	Vicia monantha	1600	1800		orchard, damp wide flat wadis with gravel	very rare
סילון קוצני	Zilla spinosa	1001	2500		weathered slopes	common
אבובית עדינה	Ziziphora tenuior	1950	2100		wide flat wadis with gravel	very rare in patches
זוזימיה מדברית	Zosima absinthiifolia	1001	2400		weathered slopes	rare

Table S2

Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. *Journal of Vegetation Science*. Appendix Table S2 Summary data on the occupancy and abundance of each species from the 2014 surveys. There were a total of 283 quadrats in 36 sites in the study.

Species	Presence (number of quadrats)	Total abundance (individuals)
Fagonia mollis	90	2943
Seraphidium herba-alba	194	2766
Tanacetum sinaicum	181	1953
Diplotaxis harra	139	1678
Zilla spinosa	145	977
Teucrium polium	145	955
Fagonia arabica	60	937
Matthiola longipetala	109	830
Echinops glaberrimus	119	771
Stachys aegyptiaca	119	757
Chiliadenus montanus	137	726
Achillea fragrantissima	67	637
Phlomis aurea	127	529
Alkanna orientalis	108	521
Verbascum sinaiticum	39	461
Echinops spinosus	104	435
Plantago sinaica	72	367
Gymnocarpus decandrum	57	366
Origanum syriacum	70	357
Lappula sinaica	30	307
Pulicaria undulata	20	301
Mentha longifolia	27	267
Ballota undulata	91	253
Scariola orientalis	33	252
Deverra tortuosa	92	234
Galium setaceum	74	220
Centaurea scoparia	50	213
Anarrhinum pubescens	62	175
Euphorbia sanctae-catharinae	9	166
Polygala sinaica	44	163

Verbascum decaisneanum	51	143
Agathophora alopecuroides	6	129
Globularia arabica	36	126
Juncus rigidus	18	119
Pterocephalus sanctus	40	111
Callipeltis cucullaris	31	100
Farsetia aegyptia	40	89
Reaumuria hirtella	14	81
Caylusea hexagyna	26	80
Nepeta septemcrenata	26	71
Stipa parviflora	21	70
Carduus pycnocephalus	21	66
Artemisia judaica	8	63
Centaurea eryngioides	19	63
Pulicaria arabica	12	62
Thymus decussatus	11	57
Pulicaria incisa	9	56
Silene schimperiana	25	53
Ephedra alata	30	51
Helianthemum kahiricum	10	51
Crataegus x sinaica	28	50
Cotoneaster orbicularis	17	47
Launaea spinosa	18	43
Ficus palmata	20	36
Iphiona mucronata	17	34
Primula boveana	1	32
Salvia multicaulis	5	32
Silene linearis	20	32
Silene leucophylla	6	30
Ballota saxatilis	11	29
Deverra triradiata	20	29
Gomphocarpus sinaicus	20	29
Reseda muricata	9	29
Reseda pruinosa	8	27
Fagonia bruguieri	3	24
Lavandula pubescens	6	24
Astragalus echinus	11	22
Iphiona scabra	13	21

Hyoscyamus muticus	6	20
Peganum harmala	8	20
Centaurea solstitialis	2	19
Phagnalon nitidum	9	19
Capparis spinosa	8	17
Anabasis articulata	4	16
Rubus sanctus	2	16
Diplotaxis acris	8	13
Foeniculum vulgare	5	12
Colchicum guessfeldtianum	5	11
Lycium shawii	2	11
Adiantum capillus-veneris	6	10
Heliotropium arbainense	6	10
Hypericum sinaicum	4	10
Ochradenus baccatus	7	10
Retama raetam	8	10
Rhamnus dispermus	8	10
Equisetum ramosissimum	2	9
Pistacia khinjuk	6	8
Astragalus spinosus	5	6
Ballota kaiseri	3	6
Colutea istria	5	6
Rosa arabica	3	6
Centaurea ammocyanus	1	5
Heliotropium digynum	5	5
Lotononis dichotoma	2	5
Citrullus colocynthis	4	4
Blepharis ciliaris	1	3
Cleome arabica	2	3
Salix mucronata	3	3
Bufonia multiceps	1	2
Cleome droserifolia	2	2
Conyza bovei	2	2
Helianthemum ellipticum	2	2
Solanum sinaicum	2	2
Alhagi graecorum	1	1
Astragalus caprinus	1	1
Lepidium draba	1	1

Monsonia nivea	1	1
Phagnalon barbeyanum	1	1
Phoenix dactylifera	1	1
Populus nigra	1	1
Pulicaria inuloides	1	1
Tamarix aphylla	1	1

Table S3

Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. *Journal of Vegetation Science*. Appendix Table S3. GPS locations (decimal degrees) of 100 m^2 quadrats (centre point ± 3 m) along with site information and Hill's number diversity indices for each quadrat sampled in 2014.

	Quadrat	Elevation (m above sea level)	Aspect	Gradient (nearest 5º)	Hill's number diversity index			Latitude (DD)	Longitude (DD)
					0D	1D	2D		
1	AP01	1898	SE	5	17	8.276886339	0.183739705	28.5447833	33.9212500
2	AP02	1951	SE	10	18	4.455565566	0.342351717	28.5480000	33.9182333
3	AP03	1993	SE	10	8	12.729872204	0.107438017	28.5510833	33.9170000
4	AP04	2051	S	10	20	6.362835676	0.210007305	28.5535667	33.9152167
5	AP05	2117	S	25	11	4.775667817	0.264860323	28.5550333	33.9150167
6	AP06	2169	SW	15	6	5.100217354	0.256296296	28.5565667	33.9164167
7	AP07	2209	W	40	20	5.993925881	0.224445646	28.5572500	33.9171000
8	AP08	2255	SW	35	8	5.319148793	0.220324865	28.5580500	33.9187333
9	AP09	2282	NE	25	20	4.600885544	0.239612188	28.5589833	33.9187500
10	AP10	2305	NW	10	13	3.549357156	0.303402647	28.5604500	33.9173667
11	AP11	2296	SW	25	17	5.180051270	0.215419501	28.5591500	33.9177500
12	AP12	2328	SW	0	23	3.864313298	0.367346939	28.5555000	33.9209500
13	AP13	2228	S	10	6	6.922381747	0.180695847	28.5534000	33.9231000
14	BC01	1773	N	5	11	7.056663610	0.266302787	28.5457000	33.9334167
15	BC02	1826	NE	25	9	12.848107080	0.100936524	28.5455333	33.9320667
16	BC03	1931	SW	5	15	6.853384027	0.210154541	28.5448167	33.9298000
17	BC04	1880	NE	25	11	6.765023325	0.25047259	28.5452500	33.9312167
18	FAH01	1755	W	10	13	1.822161436	0.628683408	28.6364333	33.9181000
19	FAH02	1789	S	5	11	7.400633968	0.163295657	28.6323333	33.9174333
20	FUS01	1867	NW	10	11	10.068516231	0.128515486	28.5693000	33.8800333
21	GAZ01	1783	N	10	15	4.358064359	0.348927336	28.5640500	33.8754833
22	GAZ02	1760	N	40	9	4.147843289	0.37716263	28.5643667	33.8756167
23	GAZ03	1731	NW	25	13	4.820125265	0.366151101	28.5650833	33.8757667
24	GAZ04	1703	W	25	10	10.354978743	0.113034072	28.5656667	33.8758833
25	GAZ05	1676	W	25	14	8.624473332	0.173203228	28.5660833	33.8755000
26	GAZ06	1652	W	20	7	8.382184096	0.154778393	28.5661667	33.8751000
27	GAZ07	1633	W	25	15	8.928165435	0.126369613	28.5663500	33.8746667
28	GAZ08	1620	SW	5	6	14.071099758	0.091050989	28.5667333	33.8746667
29	GAZ09	1618	W	0	18	4.614706611	0.262222222	28.5663333	33.8746000
30	HHL01	1755	S	10	14	5.161474634	0.23739645	28.6261000	33.9196000
31	JAL01	1594	N	5	8	2.625109050	0.472623967	28.4124333	33.8551500
32	JAL02	1569	N	35	14	4.279674007	0.380859375	28.4128000	33.8553833
33	JAL03	1544	N	15	22	5.149496180	0.237024221	28.4134667	33.8557333
34	JAL04	1521	N	5	11	5.751040151	0.210463734	28.4140167	33.8560333
35	JAL05	1497	N	5	10	3.974862032	0.316326531	28.4150167	33.8557667
36	JAL06	1480	W	5	13	6.457058359	0.204444444	28.4159500	33.8552500
37	JB01	1856	E	5	12	6.014585347	0.20661157	28.5287167	33.8839500
38	JB02	1963	NW	5	30	3.219481402	0.40433925	28.5351000	33.8622500

39	JB03	1981	NE	5	17	3.651078640	0.37352071	28.5346167	33.8597000
40	JB04	2098	NW	5	7	6.864232066	0.177469136	28.5346333	33.8544833
41	JB05	2056	E	25	13	7.089149015	0.208569628	28.5347000	33.8551333
42	JB06	2022	E	25	11	7.987816513	0.207305782	28.5348667	33.8558000
43	JB07	2000	NE	10	13	6.669820221	0.207596254	28.5350333	33.8563833
44	JB08	1992	NW	5	15	5.568833860	0.301050598	28.5353333	33.8672000
45	JB09	1980	NW	15	15	4.961891966	0.294589858	28.5358167	33.8763833
46	JB10	1943	N	20	10	10.580910642	0.139674761	28.5377667	33.8778333
47	JB11	1870	N	5	7	10.863718305	0.115	28.5394000	33.8788333
48	JB12	1798	NE	15	13	13.989417065	0.094482237	28.5409000	33.8795000
49	JDR01	1595	W	10	16	5.711203839	0.27456382	28.5548833	33.9794833
50	JDR02	1647	NW	20	17	4.455659734	0.25	28.5555500	33.9804000
51	JDR03	1700	W	15	6	14.048959039	0.088643645	28.5555000	33.9815833
52	JDR04	1746	NW	10	3	6.127589359	0.185595568	28.5545333	33.9825667
53	JDR05	1762	W	5	9	5.551994498	0.293514828	28.5551833	33.9836000
54	JDR06	1904	S	5	24	6.224367226	0.209342561	28.5586667	33.9835333
55	JDR07	1852	S	20	18	6.833374829	0.200617284	28.5571000	33.9836500
56	JDR08	1801	S	10	11	8.781124772	0.154368493	28.5561667	33.9833833
57	JHA01	1324	NW	5	11	2.924929108	0.495867769	28.6209833	33.9093333
58	JHA02	1340	SW	15	16	3.416293383	0.447809627	28.6216667	33.9097167
59	JHA03	1402	W	10	11	9.450662911	0.117346939	28.6231333	33.9112167
60	JHA04	1449	SW	10	10	9.004546757	0.130177515	28.6239500	33.9117333
61	JHA05	1500	S	15	16	6.265274407	0.224732461	28.6247167	33.9120500
62	JHA06	1550	S	10	15	13.123801022	0.103305785	28.6257667	33.9118667
63	JHA07	1604	SW	0	9	9.747187539	0.162629758	28.6266667	33.9121667
64	JHA08	1649	SW	5	7	9.650258715	0.129757785	28.6272500	33.9127500
65	JHA09	1689	NW	10	7	9.941375297	0.125868056	28.6273333	33.9137167
66	JHA10	1710	S	5	12	9.836764227	0.157017909	28.6304500	33.9147000
67	JK01	1791	N	15	13	2.109056370	0.599609375	28.5327667	33.9660833
68	JK02	1816	N	20	15	6.769217557	0.200951249	28.5318500	33.9653000
69	JK03	1853	N	10	8	11.785537012	0.114257813	28.5297167	33.9638000
70	JK04	1924	NE	30	15	6.290185201	0.214915596	28.5284667	33.9627500
71	JK05	2008	E	35	8	4.117429200	0.372767857	28.5260333	33.9623833
72	JK06	2069	SE	15	8	7.639556102	0.164352131	28.5244500	33.9603667
73	JK07	2067	N	5	2	7.774078838	0.18766901	28.5229167	33.9602667
74	JK08	2288	NW	20	23	3.212213639	0.432942708	28.5213167	33.9558167
75	JK09	2336	W	15	12	6.374258180	0.228099174	28.5176667	33.9554333
76	JK10	2368	E	15	14	7.284091195	0.216792181	28.5114333	33.9630667
77	JK11	2315	E	10	14	3.556787336	0.391242435	28.5110167	33.9653167
78	JK12	2263	SE	25	13	5.739525321	0.231866825	28.5112167	33.9674667
79	JK13	2629	E	5	23	4.139487244	0.338842975	28.5125500	33.9539000
80	JK14	2583	E	20	13	2.454140787	0.455970452	28.5121333	33.9545833
81	JK15	2512	E	25	19	2.618137363	0.526367188	28.5108000	33.9584500
82	JK16	2462	E	25	13	3.973202083	0.275495547	28.5101833	33.9596333
83	JK17	2404	E	15	23	4.858931394	0.2421875	28.5108833	33.9613500
84	JK18	2462	E	20	11	2.888341165	0.471886714	28.5069500	33.9571500

85	JK19	2385	NE	10	8	4.497226112	0.265432099	28.5110833	33.9623333
86	JK20	2257	NE	35	10	2.911299308	0.470204082	28.5213333	33.9571500
87	JK21	2208	NE	30	20	3.555222559	0.417888757	28.5219500	33.9577000
88	JK22	2156	NE	35	22	3.758306151	0.324150597	28.5233167	33.9585333
89	JK23	2124	SE	20	6	7.108166386	0.18494898	28.5238667	33.9589167
90	JK24	2052	E	25	14	4.527606171	0.281965848	28.5249167	33.9612167
91	JK25	1998	NE	30	19	3.285351440	0.484764543	28.5268000	33.9624500
92	JM01	2007	NE	5	13	5.635406567	0.257487217	28.5448333	33.9751167
93	JM02	1984	E	5	10	6.797283149	0.218934911	28.5455167	33.9758000
94	JM03	1962	NE	35	8	3.485685549	0.475529584	28.5461500	33.9762667
95	JM04	1955	NE	30	16	5.115472599	0.25	28.5463333	33.9763000
96	JM05	1923	NE	15	15	4.557099647	0.386258455	28.5463000	33.9769000
97	JM06	1907	NE	30	16	8.048360735	0.135	28.5467000	33.9772000
98	JM07	1896	N	5	11	9.616002619	0.131113424	28.5469833	33.9772667
99	JM08	1871	N	15	20	6.407700219	0.183364839	28.5479833	33.9774333
100	JM09	1849	N	10	6	6.738781224	0.1936	28.5487500	33.9772833
101	JM10	1823	N	15	4	6.829510706	0.17578125	28.5491833	33.9772167
102	JM11	1799	N	10	16	5.910927457	0.229166667	28.5498000	33.9770167
103	JM12	1774	N	15	11	6.938642678	0.160493827	28.5502833	33.9768667
104	JM13	1753	N	10	4	4.598826845	0.323675871	28.5503667	33.9770167
105	JM14	1724	N	15	11	5.591783761	0.232142857	28.5508667	33.9769500
106	JM15	1702	N	5	17	11.251507824	0.117283951	28.5513000	33.9768333
107	JM16	1674	N	20	6	5.139412479	0.248699272	28.5520667	33.9765667
108	JM17	1654	N	25	14	5.306341291	0.26625	28.5524500	33.9762000
109	JM18	1624	N	20	15	6.604129943	0.243764172	28.5529833	33.9760500
110	JM19	1605	NE	10	16	6.696333460	0.256804734	28.5533833	33.9759500
111	JMA01	2025	SW	5	17	3.290796164	0.379108839	28.5184500	33.8191667
112	JMA02	1925	E	10	14	2.637477816	0.4984	28.5218500	33.8231000
113	JMA03	1825	SW	35	3	4.086469860	0.319615912	28.5219500	33.8248667
114	JMA04	1725	SE	35	9	5.760243565	0.193877551	28.5206667	33.8276000
115	JMA05	1619	NE	40	14	5.612155029	0.209876543	28.5195000	33.8312333
116	JMA06	1524	NE	20	8	7.604828622	0.166015625	28.5189833	33.8364833
117	JMA07	1424	NE	15	21	3.198153155	0.440329218	28.5214833	33.8368500
118	SGRS01	1739	SE	5	13	13.924583918	0.095802469	28.6177333	33.9213833
119	SGRS02	1686	SE	5	7	9.445633781	0.153539172	28.6158333	33.9224167
120	SGRS03	1642	N	5	19	12.703171975	0.094227336	28.6140000	33.9234667
121	US01	2580	NE	5	12	1.182870543	0.9232	28.3617500	33.9171833
122	US02	2566	E	25	11	3.139821206	0.470507545	28.3615333	33.9173333
123	US03	2509	NE	25	13	1.680201839	0.715419501	28.3610167	33.9180000
124	US04	2449	NE	30	12	1.206969808	0.911303407	28.3609667	33.9189833
125	US05	2405	NE	15	12	2.295966888	0.598097503	28.3614333	33.9193667
126	US06	2337	E	10	14	1.859801362	0.723865878	28.3623000	33.9199333
127	US07	2304	NE	15	8	3.283998677	0.426035503	28.3627333	33.9203333
128	US08	2252	N	20	5	1.773062949	0.735294118	28.3633333	33.9209333
129	US09	2199	NE	20	17	4.057488356	0.384688091	28.3644500	33.9207833
130	US10	2148	NE	25	18	2.181483295	0.662290629	28.3653500	33.9215500

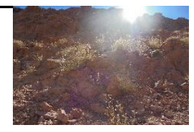
131	US11	2111	NE	15	14	7.844588219	0.161652893	28.3654667	33.9225167
132	US12	2049	NW	15	7	4.854844706	0.317174515	28.3675333	33.9236667
133	WA01	1589	NE	20	16	3.232395322	0.4086	28.5503000	33.9501000
134	WA02	1632	SW	10	13	3.921979462	0.346342651	28.5502167	33.9512000
135	WA03	1704	N	30	14	11.102946765	0.1434375	28.5466833	33.9511333
136	WA04	1634	N	5	14	8.024092252	0.209420154	28.5478500	33.9524500
137	WA05	1703	SW	40	17	10.989182916	0.119872	28.5443833	33.9578000
138	WA06	1734	N	25	7	8.029984818	0.176762354	28.5428167	33.9562833
139	WAH01	1729	N	20	4	7.874831968	0.1938	28.5457500	33.9505333
140	WAH02	1792	N	10	18	6.201041903	0.249155767	28.5446667	33.9503000
141	WAH03	1853	N	30	22	3.927592272	0.414836911	28.5436833	33.9505833
142	WAH04	1901	N	25	17	7.169118748	0.199538639	28.5428333	33.9495500
143	WAH05	1956	N	5	18	8.687395617	0.139053254	28.5420167	33.9491833
144	WAH06	2094	N	20	9	7.304906223	0.197355372	28.5401000	33.9485000
145	WAH07	2006	NE	30	15	4.158923154	0.402729139	28.5417500	33.9487333
146	WAJ01	1687	NE	15	18	12.191800915	0.132315017	28.5491667	33.9387833
147	WAJ02	1782	NW	35	21	7.386183796	0.203546407	28.5475667	33.9375500
148	WAR01	1476	N	5	13	5.633223222	0.284489796	28.5771833	33.9829000
149	WAR02	1526	N	20	20	16.111785766	0.0752	28.5750833	33.9826667
150	WAR03	1573	N	20	13	9.428775119	0.134696955	28.5742000	33.9827000
151	WAR04	1627	N	30	5	7.471667103	0.175384615	28.5733333	33.9826500
152	WAR05	1677	N	35	11	6.088077006	0.231426693	28.5727167	33.9828000
153	WAR06	1721	N	30	10	3.746225576	0.37964357	28.5721000	33.9829667
154	WAR07	1781	SE	15	14	5.362322807	0.252739226	28.5713000	33.9831333
155	WAR08	1761	N	5	6	11.140920952	0.111531191	28.5709000	33.9833667
156	WAR09	1795	N	20	12	12.122806836	0.102638556	28.5697333	33.9834500
157	WAR10	1804	N	10	8	9.002771765	0.165619835	28.5693833	33.9831167
158	WAR11	1850	N	10	15	7.437873350	0.16805411	28.5679833	33.9834500
159	WAR12	1871	N	5	9	3.835363652	0.374710744	28.5669833	33.9836333
160	WAR13	1938	N	20	6	9.120347455	0.151962304	28.5650000	33.9834000
161	WAR14	1893	N	25	14	10.846300118	0.129529363	28.5660833	33.9833667
162	WAT01	1737	NW	10	19	16.312125209	0.069243761	28.5827833	33.8869000
163	WAT02	1764	N	5	5	10.500936888	0.124705882	28.5812000	33.8875833
164	WAT03	1789	W	10	12	10.117803512	0.1178125	28.5788500	33.8899833
165	WAT04	1801	NW	5	10	5.638814736	0.313432836	28.5759333	33.8911167
166	WAT05	1825	SW	10	5	7.997850222	0.149101837	28.5736333	33.8943667
167	WAT06	1996	N	0	14	8.055573001	0.134986226	28.5600667	33.9000333
168	WAT07	1974	NE	10	10	7.796129288	0.22972973	28.5606833	33.9001333
169	WAT08	1951	NE	5	15	9.383467289	0.133674215	28.5615833	33.9007667
170	WAT09	1921	N	10	18	5.590505195	0.28625	28.5626333	33.9022333
171	WAT10	1898	N	15	8	7.877810406	0.158464035	28.5639167	33.9020833
172	WAT11	1870	NW	0	10	7.110831302	0.180423667	28.5669167	33.9006500
173	WAT12	1850	N	10	8	10.529704964	0.110082645	28.5693500	33.8986833
174	WB01	1452	N	15	11	5.954147518	0.212653486	28.5788667	33.9245167
175	WB02	1502	N	15	12	8.604623787	0.131944444	28.5777500	33.9236333
176	WB03	1549	NE	10	12	14.250960116	0.093449626	28.5769000	33.9226833

177	WB04	1604	NE	20	6	12.262803336	0.089382716	28.5764333	33.9217500
178	WB05	1652	NE	20	6	11.685650185	0.14852054	28.5762333	33.9212167
179	WB06	1679	NW	20	7	15.816711568	0.082138641	28.5758167	33.9208333
180	WF01	1751	NE	25	16	6.055643585	0.244760899	28.5516500	33.9576000
181	WF02	1750	W	10	15	6.747559589	0.202371252	28.5519167	33.9583167
182	WF03	1823	SW	40	12	2.573079233	0.529369883	28.5483167	33.9613333
183	WF04	1801	NE	30	6	8.496554652	0.149689523	28.5479167	33.9607333
184	WF05	1836	N	35	9	10.102815878	0.126704785	38.5451167	33.9626500
185	WF06	1870	SW	30	11	9.937875681	0.130430604	28.5467833	33.9643833
186	WF07	1931	S	40	18	3.701760308	0.394048776	28.5476333	33.9644667
187	WF08	2007	S	45	10	9.685842451	0.123981033	28.5488000	33.9646167
188	WG01	1914	NW	5	12	4.195849081	0.292165511	28.5383000	33.9206167
189	WG02	1912	NW	5	7	8.879955221	0.176767677	28.5374333	33.9190500
190	WG03	1907	W	10	14	6.180754087	0.225618451	28.5369500	33.9177000
191	WG04	1891	NW	5	10	9.877623239	0.140310204	28.5356000	33.9143167
192	WG05	1889	SW	5	9	9.246870243	0.160950912	28.5351333	33.9133833
193	WG06	1888	N	10	5	8.653556032	0.149653434	28.5346333	33.9124833
194	WG07	1887	SE	15	12	6.881538708	0.198333333	28.5343833	33.9113167
195	WG08	1875	W	5	14	5.816177212	0.214285714	28.5332333	33.9083500
196	WG09	1876	SE	15	2	7.262543835	0.184285714	28.5322833	33.9052167
197	WG10	2011	SW	20	10	5.344409808	0.293207908	28.5371500	33.8983500
198	WG11	1965	S	20	9	7.671860555	0.146449704	28.5358833	33.8988833
199	WG12	1910	SW	10	19	11.250003570	0.121957815	28.5346000	33.8990833
200	WG13	1885	SE	5	9	11.848855916	0.09815586	28.5331667	33.8996833
201	WG14	1792	NE	5	5	7.038790151	0.193201526	28.5360667	33.8858000
202	WG15	1768	NE	5	6	12.205056450	0.107354184	28.5474833	33.8786333
203	WG16	1717	NW	0	12	9.341550033	0.141111111	28.5436667	33.8753000
204	WJ01	1646	SE	10	18	2.412012300	0.661599619	28.5832167	33.9457167
205	WJ02	1710	SE	30	14	6.467887368	0.264060357	28.5845667	33.9452833
206	WJ03	1766	SE	40	8	9.522124811	0.147727273	28.5853500	33.9447833
207	WJ04	1822	NE	25	15	5.005337212	0.287407407	28.5858500	33.9440667
208	WJ05	1878	SE	5	14	5.932466299	0.229275061	28.5867833	33.9431000
209	WJ06	1929	NE	20	12	3.580854321	0.385354377	28.5872000	33.9417333
210	WJA01	1792	N	5	18	5.079225877	0.273662551	28.5337333	33.9649500
211	WJA02	1810	NE	10	11	11.685068171	0.105916728	28.5325000	33.9641500
212	WJA03	1852	NE	10	10	17.708575024	0.07231405	28.5316833	33.9627833
213	WJA04	1901	S	20	12	8.987254776	0.154840563	28.5316333	33.9617500
214	WJA05	1954	E	15	10	14.409980678	0.085648148	28.5323000	33.9614333
215	WJA06	2007	NE	25	19	9.807889383	0.125	28.5310667	33.9596000
216	WJA07	2060	N	30	10	5.097383596	0.290816327	28.5305333	33.9593000
217	WJA08	2094	E	5	17	7.640075026	0.183391003	28.5308000	33.9573000
218	WJA09	2156	SE	5	12	7.869019257	0.142733564	28.5330500	33.9557167
219	WJA10	2199	NE	10	4	9.510517013	0.135147929	28.5335167	33.9543000
220	WJA11	2251	NE	0	13	4.324772196	0.345	28.5341667	33.9532333
221	WJA12	2290	NE	5	20	4.489406338	0.339359504	28.5343500	33.9524167
222	WJA13	2287	NE	5	13	3.692375380	0.327032136	28.5347000	33.9525167

223	WJA14	2312	E	5	20	1.783049832	0.69550173	28.5345000	33.9515333
224	WJA15	2188	SE	0	20	3.582729340	0.303312835	28.5344000	33.9544833
225	WL01	1490	SE	5	7	10.981542241	0.142115088	28.5766333	33.9736667
226	WL02	1541	SE	15	5	6.771214482	0.191485969	28.5787000	33.9716333
227	WL03	1590	SE	15	11	15.847571912	0.0819161	28.5797333	33.9706333
228	WL04	1640	SE	20	9	13.664292435	0.115646259	28.5805833	33.9698833
229	WL05	1693	SW	15	9	9.556318536	0.162644628	28.5820333	33.9702833
230	WL06	1749	SE	10	16	4.324926757	0.366804141	28.5828667	33.9695833
231	WL07	1829	N	10	8	4.846199789	0.307218935	28.5847333	33.9699500
232	WL08	1859	W	20	8	8.475029492	0.162238996	28.5848500	33.9704667
233	WMS01	1648	NW	20	10	6.826910689	0.236131657	28.5490333	33.9410333
234	WMS02	1713	N	5	13	11.880561164	0.102880658	28.5463667	33.9400167
235	WMS03	1754	NW	5	8	15.727444662	0.0853125	28.5445500	33.9400500
236	WMS04	1816	W	30	13	9.861461969	0.120772246	28.5435167	33.9408333
237	WMS05	1912	W	30	12	5.329006922	0.225847593	28.5415500	33.9417167
238	WS01	1522	NW	25	17	12.318286720	0.098689792	28.5598500	33.9573667
239	WS02	1569	NW	25	21	3.193428132	0.450612731	28.5591500	33.9574667
240	WS03	1618	NW	30	9	4.379130451	0.271224643	28.5575667	33.9577167
241	WS04	1646	NW	35	10	11.607547527	0.109026063	28.5580833	33.9588333
242	WS05	1546	SE	20	14	3.510011735	0.370844074	28.5598833	33.9559500
243	WS06	1573	E	25	15	7.139434172	0.174702278	28.5581833	33.9553500
244	WS07	1629	N	25	9	9.218326161	0.157123736	28.5563500	33.9554500
245	WS08	1700	N	40	6	6.849377289	0.19459285	28.5551833	33.9555833
246	WSG01	1369	NW	30	9	6.688585857	0.228373702	28.5903167	33.9134667
247	WSG02	1436	SE	5	9	10.430281342	0.115420129	28.5893833	33.9114667
248	WSG03	1481	NE	5	8	12.385712618	0.101105592	28.5882167	33.9095833
249	WSG04	1539	NE	5	6	9.167128240	0.154147383	28.5867167	33.9075500
250	WSG05	1612	NE	20	4	16.674020984	0.088960302	28.5851667	33.9051167
251	WSG06	1679	NE	5	13	11.730822701	0.103537981	28.5839667	33.9026667
252	WSGR01	1825	N	5	6	13.236936949	0.107744304	28.5744500	33.8975000
253	WSGR02	1776	N	10	7	10.012945871	0.169876543	28.5767000	33.8996500
254	WSGR03	1725	NW	5	6	9.519204795	0.152199762	28.5821000	33.9012167
255	WSH01	1525	NE	5	13	2.603865656	0.567593292	28.5625667	33.9651333
256	WSH02	1531	N	10	8	15.125281669	0.086894133	28.5620667	33.9507667
257	WSH03	1565	E	25	10	7.206660808	0.231649324	28.5608167	33.9656667
258	WSH04	1649	N	40	10	9.910363956	0.135371901	28.5585833	33.9656667
259	WSH05	1686	NE	25	12	12.195763229	0.117101322	28.5582833	33.9649667
260	WSH06	1747	N	35	9	7.431920152	0.171600666	28.5572667	33.9656833
261	WSH07	1838	N	40	19	4.994300261	0.278806584	28.5561167	33.9656333
262	WSH08	1905	NE	40	10	5.927843623	0.214625446	28.5553667	33.9663333
263	WSH09	1987	N	30	11	6.770962645	0.199372057	28.5547333	33.9663833
264	WT01	1421	NE	30	12	3.886348037	0.30825831	28.5831667	33.9224833
265	WT02	1477	NE	20	18	2.739831165	0.522928994	28.5816500	33.9207500
266	WT03	1530	E	10	12	9.657941631	0.196361059	28.5802167	33.9199000
267	WT04	1624	NE	35	14	5.110547604	0.3155116	28.5789333	33.9187833
268	WT05	1596	E	15	20	6.196609235	0.257610515	28.5795500	33.9185500

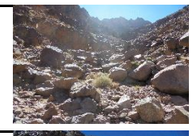
269	WT06	1674	N	30	15	12.986866443	0.093834505	28.5784667	33.9174000
270	WT07	1732	NE	20	18	12.342102612	0.106305267	28.5777000	33.9333167
271	WT08	1832	NE	20	11	8.944431660	0.140758203	28.5764167	33.9320333
272	WT101	1585	NE	10	8	4.915314629	0.316144786	28.5656833	33.9309500
273	WT102	1641	NW	15	23	5.204469215	0.298155128	28.5646500	33.9292167
274	WT103	1706	N	20	9	8.321153091	0.153687371	28.5634667	33.9283667
275	WT104	1771	N	40	6	8.322876191	0.149368559	28.5625833	33.9280333
276	WT105	1832	N	15	8	11.908791223	0.110893556	28.5621167	33.9269833
277	WT106	1893	SE	20	3	12.685687001	0.098072562	28.5609833	33.9266833
278	WTF01	1377	N	25	10	11.116419013	0.118227732	28.5979667	33.9144167
279	WTF02	1418	E	20	16	6.932389446	0.22175981	28.5967000	33.9105333
280	WTF03	1470	E	20	8	8.957490523	0.15451895	28.5967000	33.9088167
281	WTF04	1572	NE	35	14	2.943697947	0.4190625	28.5963167	33.9068333
282	WTF05	1621	E	35	16	6.896264163	0.223494089	28.5966167	33.9053333
283	WTF06	1654	NE	15	19	7.200292335	0.199432892	28.5966500	33.9046500

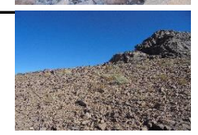
Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. Journal of Vegetation Science. Appendix Table S4. Site descriptions and photos for 100 m2 quadrats sampled in 2014.

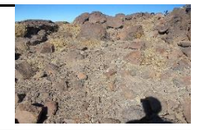
Day	Month	Year	Area	Quadrat order in transect	Quadrat code	GPS Latitude (degrees decimal minutes)	GPS Longitude (degrees decimal minutes)	Elevation (m)	Aspect	Gradient (deg.)	Site notes	Site photo
9	11	2014	Abu Jifa	1	WAJ01	N 28° 32.950'	E 033° 56.327'	1687	NE	15	Bottom of wadi abu jifa. Below a well. Small boulders 0.5-1m. Gravel/sand & rock scree between. Next to wadi wall to north; bare rock ~5m high.	
9	11	2014	Abu Jifa	2	WAJ02	N 28° 32.854'	E 033° 56.253'	1782	NW	35	South slope near top of wadi abu jifa. Bare rock & stne/gravel scree over it.	
19	11	2014	Ain alNajila (Jebel Bab trip)	2	JB02	N 28° 32.106'	E 033° 51.735'	1963	NW	<5	Spring. Bare rock wall, and floor. Sand patches, water pools below spring. A few large boulders 2-3m.	
9	11	2014	Bait Carob	1	BC01	N 28° 32.742'	E 033° 56.005'	1773	N	<5	Over Abu Jifa pass. Bottom of next wadi; start of Wadi Gebal. Wadi bottom river stones, pebbles and sand. Next to Bait Carob garden.	
9	11	2014	Bait Carob	2	BC02	N 28° 32.732'	E 033° 55.924'	1826	NE	25	Center of gully/wadi above Bait Carob garden. Boulders 1-3m. Stones, bare rock and small gravel patches.	
9	11	2014	Bait Carob	3	BC03	N 28° 32.689'	E 033° 55.788'	1931	SW	5	Top of gully, open area, gentle slope. Bare rock & gravel, scattered stones.	
9	11	2014	Bait Carob	4	BC04	N 28° 32.715'	E 033° 55.873'	1880	NE	25	Center of wadi. Small boulders 0.5-1m, rock scree and small dust/gravel patches.	
9	10	2014	Farsh Abu Hamoth	1	FAH01	N 28° 38.186'	E 033° 55.086'	1755	W	10	Gentle slope, gravel & small stones.	
9	10	2014	Farsh Abu Hamoth	2	FAH02	N 28° 37.940'	E 033° 55.046'	1789	S	<5	Nearly flat. Gravel & small stones, small bare rock patches.	
29	11	2014	Farsh UmSila (Galt alAzrak trip)	1	FUS01	N 28° 34.158'	E 033° 52.802'	1867	NW	10	Farsh. Gentle slope with few boulders ~1m. Dirt, gravel & sand floor.	
29	11	2014	Galt alAzrak (Galt alAzrak trip)	1	GAZ01	N 28° 33.843'	E 033° 52.529'	1783	N	10	Bare rock on ridge above Galt alAzrak. Few gravel patches.	

29	11	2014	Galt alAzrak (Galt alAzrak trip)	2	GAZ02	N 28° 33.862'	E 033° 52.537'	1760	N	40	Very steep slope, bare rock & stone scree. 1 boulder ~3m.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	3	GAZ03	N 28° 33.905'	E 033° 52.546'	1731	NW	25	Slope. Bare rock, stone & gravel scree.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	4	GAZ04	N 28° 33.940'	E 033° 52.553'	1703	W	25	East slope. Large boulders 1-4m, small gravel patches in between.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	5	GAZ05	N 28° 33.965'	E 033° 52.530'	1676	W	25	Slope. A few large boulders 2-4m. Stones & gravel.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	6	GAZ06	N 28° 33.970'	E 033° 52.506'	1652	W	20	Slope. Rocks & gravel, few bare rock patches.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	7	GAZ07	N 28° 33.981'	E 033° 52.480'	1633	W	25	Bare rock, cracks, small ledge, above pool.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	8	GAZ08	N 28° 34.004'	E 033° 52.480'	1620	SW	<5	Spring below pool, above wadi. Cave overhang & bare rock, floor gravel & rocks. Plants forming large mats.
29	11	2014	Galt alAzrak (Galt alAzrak trip)	9	GAZ09	N 28° 33.980'	E 033° 52.476'	1618	W	0	Sand floor- flat. Next to bare rock cliff.
9	10	2014	Hajar Hilal	1	HHL01	N 28° 37.566'	E 033° 55.176'	1755	S	10	High farsh. Bare rocks. Stones & gravel/dirt.
16	11	2014	Jebel Abbas Pasha	1	AP01	N 28° 32.687'	E 033° 55.275'	1898	SE	<5	wadi Ziri. Wadi bed, wall to west. Bare rock to east. Sand & river stones & larger stones ~0.5-1m. Red rock. 
16	11	2014	Jebel Abbas Pasha	3	AP03	N 28° 33.065'	E 033° 55.020'	1993	SE	10	Wadi Ziri bottom, scattered boulders 1-2m, some black stone. Sand floor with scattered stones. Outcrops surrounding becoming black from red. 
16	11	2014	Jebel Abbas Pasha	5	AP05	N 28° 33.302'	E 033° 54.901'	2117	S	25	Slope before ridge top. Dirt & dust with scattered black rocks/stones, out of wadi ziri. 
16	11	2014	Jebel Abbas Pasha	6	AP06	N 28° 33.394'	E 033° 54.985'	2169	SW	15	Slope, bare black rock. Gravel & loose stones between. 
16	11	2014	Jebel Abbas Pasha	7	AP07	N 28° 33.435'	E 033° 55.026'	2209	W	40	Very steep bare rock outcrop (black), stones and scree over parts. 

16	11	2014	Jebel Abbas Pasha	8	AP08	N 28° 33.483'	E 033° 55.124'	2255	SW	35	Top of gully, blak rock scree over dirt, few larger boulders ~1m.	
16	11	2014	Jebel Abbas Pasha	9	AP09	N 28° 33.539'	E 033° 55.125'	2282	NE	25	Steep slope below Pasha's road. Black rock scree over dirt.	
16	11	2014	Jebel Abbas Pasha	10	AP10	N 28° 33.627'	E 033° 55.042'	2305	NW	10	Gentle slope on black rock. Loose stones over dirt.	
16	11	2014	Jebel Abbas Pasha	11	AP11	N 28° 33.549'	E 033° 55.065'	2296	SW	25	Black rock bare outcrop & stone scree slope.	
16	11	2014	Jebel Abbas Pasha	12	AP12	N 28° 33.330'	E 033° 55.257'	2328	SW	0	Rock ledge, black rock. Bare rock & gravel.	
16	11	2014	Jebel Abbas Pasha	12	AP13	N 28° 33.204'	E 033° 55.386'	2228	S	10	Top of farsh Abu Mashood. Gully between bare red rock. Floor dirt & stones, semi burried smooth boulders 1-3m	
19	11	2014	Jebel Bab	3	JB03	N 28° 32.077'	E 033° 51.582'	1981	NE	5	Gravel floor slight slope, bare rock to edges of site, relatively flat.	
19	11	2014	Jebel Bab	4	JB04	N 28° 32.078'	E 033° 51.269'	2098	NW	<5	Top of Jebel Bab just below bare rock summit. Bare rock ledge & small gravel/stone scree patches	
19	11	2014	Jebel Bab	5	JB05	N 28° 32.082'	E 033° 51.308'	2056	E	25	Bare rock & some stone scree, below bare rock summit-cap. Few large stones ~0.5m, mostly stone scree.	
19	11	2014	Jebel Bab	6	JB06	N 28° 32.092'	E 033° 51.348'	2022	E	25	Scattered boulder & rock scree over bare rock slope. Boulders 0.5-1m, stone scree & gravel in between.	
19	11	2014	Jebel Bab	7	JB07	N 28° 32.102'	E 033° 51.383'	2000	NE	10	Small valley bottom/dry watercourse from saddle of Jebel Bab. Bare rock in the course. Few boulders 0.5-1m, gravel & loose rock beside.	
10	12	2014	Jebel Deir	1	JDR01	N 28° 33.293'	E 033° 58.769'	1595	W	10	Bare rock, small patch of gravel.	
10	12	2014	Jebel Deir	2	JDR02	N 28° 33.333'	E 033° 58.824'	1647	NW	20	Bare rock next to small monastery.	
10	12	2014	Jebel Deir	3	JDR03	N 28° 33.330'	E 033° 58.895'	1700	W	15	Shallow gully. Boulders ~1m. Stone & gravel patch.	
10	12	2014	Jebel Deir	4	JDR04	N 28° 33.272'	E 033° 58.954'	1746	NW	10	Bare rock & gravel patches by steps.	

10	12	2014	Jebel Deir	5	JDR05	N 28° 33.311'	E 033° 59.016'	1762	W	<5	Above dam. Small walls. Mud & small scattered stones on floor.
10	12	2014	Jebel Deir	6	JDR06	N 28° 33.520'	E 033° 59.012'	1904	S	5	Farsh. Steep walls over 20m bare rock bordering farsh to W&E. Floor few borders ~1m, stones & gravel. Bare rock outcrop ~1m high to side of site.
10	12	2014	Jebel Deir	7	JDR07	N 28° 33.426'	E 033° 59.019'	1852	S	20	Gully. Floor boulders ~0.5-1m. Stones & gravel.
10	12	2014	Jebel Deir	8	JDR08	N 28° 33.370'	E 033° 59.003'	1801	S	10	Center of gully above monastery. Large boulders 1-2m. Stones & gravel patch.
9	10	2014	Jebel Hashwa	1	JHA01	N 28° 37.259'	E 033° 54.560'	1324	NW	<5	Wadi bottom sand & scattered rocks. Next to garden wall.
9	10	2014	Jebel Hashwa	2	JHA02	N 28° 37.300'	E 033° 54.583'	1340	SW	15	Bare rock, red. Black rock seam. Loose stones and gravel over surface.
9	10	2014	Jebel Hashwa	3	JHA03	N 28° 37.388'	E 033° 54.673'	1402	W	10	Bare red rock & stone.gravel scree. 1 boulder ~2m.
9	10	2014	Jebel Hashwa	4	JHA04	N 28° 37.437'	E 033° 54.704'	1449	SW	10	Center of wadi. Large boulders 1-4m. Stones & dirt between.
9	10	2014	Jebel Hashwa	6	JHA06	N 28° 37.546'	E 033° 54.712'	1550	S	10	Center wadi gully. Boulders 1-2m. Stones & dirt patch.
9	10	2014	Jebel Hashwa	7	JHA07	N 28° 37.600'	E 033° 54.730'	1604	SW	0	Flat area, center of wadi between bare rock sides ~5m. Floor sand & dry mud, some boulders submerged ~2m.
9	10	2014	Jebel Hashwa	8	JHA08	N 28° 37.635'	E 033° 54.765'	1649	SW	<5	Center of wadi gully. Flat area, boulders 1-3m, Sand inbetween.
9	10	2014	Jebel Hashwa	9	JHA09	N 28° 37.640'	E 033° 54.823'	1689	NW	10	Spring near to top of gully, boulders ~1m dirt in between.
9	10	2014	Jebel Hashwa	10	JHA10	N 28° 37.827'	E 033° 54.882'	1710	S	<5	Farsh. Sand bottom dry waterway, stones, sand & gravel.
13	11	2014	Jebel Katherine	1	JK01	N 28° 31.966'	E 033° 57.965'	1791	N	15	Side wadi off Wadi Arbein. Base of slope. Black volcanic rock starts. Stones & rock scree. Near gardens and tracks. 
13	11	2014	Jebel Katherine	2	JK02	N 28° 31.911'	E 033° 57.918'	1816	N	20	Side gully. Rock scree on dust/dirt. 
13	11	2014	Jebel Katherine	3	JK03	N 28° 31.783'	E 033° 57.828'	1853	N	10	Wadi bottom. Boulders 1-1.5m, river stones & dust. 
13	11	2014	Jebel Katherine	4	JK04	N 28° 31.708'	E 033° 57.765'	1924	NE	30	Steep slope. Rock scree & dust, few bare rock outcrops of black rock. 

13	11	2014	Jebel Katherine 5	JK05	N 28° 31.562'	E 033° 57.743'	2008	E	35	slope. Bare black rock with rock scree & dirt covering.	
13	11	2014	Jebel Katherine 7	JK07	N 28° 31.375'	E 033° 57.616'	2067	N	<5	Ain Al Shinar spring. Rock wall. Bare rock face. Flat ledge with dirt and stone floor, few boulders 1-2m. Site next to stone wall.	
13	11	2014	Jebel Katherine 8	JK08	N 28° 31.279'	E 033° 57.349'	2288m	NW	20	Gentle slope top of a ridge. Dirt/dust & small loose stones.	
13	11	2014	Jebel Katherine 9	JK09	N 28° 31.060'	E 033° 57.326'	2336	W	15	Very narrow gully constraining quad to 5x10m. Steep bare black rock walls ~4m high. Rocks & dirt soil bottom.	
13	11	2014	Jebel Katherine 10	JK10	N 28° 30.686'	E 033° 57.784'	2368	E	15	Gully between bare rock. Dust/dirt bottom & scattered rock. Donkey grazing evident.	
13	11	2014	Jebel Katherine 11	JK11	N 28° 30.661'	E 033° 57.919'	2315	E	10	Bottom of gully. Bare rock wall to South 5-10m high. Floor dust & boulders ~1m. Smaller rocks scattered.	
13	11	2014	Jebel Katherine 12	JK12	N 28° 30.673'	E 033° 58.048'	2263	SE	25	Gully bottom. Dust and scattered stones. Side nothwards bare black rock, rest slope of stone scree & dirt.	
14	11	2014	Jebel Katherine 13	JK13	N 28° 30.753'	E 033° 57.234'	2629	Summit	<5	Summit of Jebel Katherine, next to chapel. Bare rock & very small patches of dirt in cracks.	
14	11	2014	Jebel Katherine 14	JK14	N 28° 30.728'	E 033° 57.275'	2583	E	20	Side slope below bare rock summit. Stones & loose dirt.	
14	11	2014	Jebel Katherine 15	JK15	N 28° 30.648'	E 033° 57.507'	2512	E	25	Slope, rocks up to ~0.5m, smaller stones & dirt. Just below Israeli road.	
14	11	2014	Jebel Katherine 16	JK16	N 28° 30.611'	E 033° 57.578'	2462	E	25	Slope, bare rock patches and stone scree over dirt.	
14	11	2014	Jebel Katherine 17	JK17	N 28° 30.653'	E 033° 57.681'	2404	E	15	Gentle slope. Dirst & rock scree. Site bounded by large boulder pile 3-5m high and small stone wall to north.	

14	11	2014	Jebel Katherine	18	JK18	N 28° 30.417'	E 033° 57.429'	2462	E	20	Slope below Israeli road. Dirt & stone scree. Few rocks ~0.5m.	
14	11	2014	Jebel Katherine	19	JK19	N 28° 30.665'	E 033° 57.740'	2385	NE	10	Start of gully. Bare black rock sides. Near a spring. Dust and scattered stones.	
14	11	2014	Jebel Katherine	20	JK20	N 28° 31.280'	E 033° 57.429'	2257	NE	35	Steep slope black rocks & stone scree over dirt.	
14	11	2014	Jebel Katherine	21	JK21	N 28° 31.317'	E 033° 57.462'	2208	NE	30	Top of small gully. Rock scree and dust on ground.	
14	11	2014	Jebel Katherine	22	JK22	N 28° 31.399'	E 033° 57.512'	2156	NE	35	Steep bare black rock. Surface jagged & loose flakes. Top of narrow gully.	
14	11	2014	Jebel Katherine	24	JK24	N 28° 31.495'	E 033° 57.673'	2052	E	25	slope between paths. Rock scree. 2 larger stones ~1m.	
14	11	2014	Jebel Katherine	25	JK25	N 28° 31.608'	E 033° 57.747'	1998	NE	30	Steep slope, dirt and rock scree.	
14	12	2014	Jebel Madsous	1	JMA01	N 28° 31.107'	E 033° 49.150'	2025	SW	5	Summit of Madsous. Black bare rock. Loose stones & gravel.	
14	12	2014	Jebel Madsous	2	JMA02	N 28° 31.311'	E 033° 49.386'	1925	E	10	Black bare rock. Dirt & loose stone floor.	
14	12	2014	Jebel Madsous	3	JMA02	N 28° 31.317'	E 033° 49.492'	1825	SW	35	Steep rock scree slope.	
14	12	2014	Jebel Madsous	4	JMA03	N 28° 31.240'	E 033° 49.656'	1725	SE	35	Stone scree slope.	
14	12	2014	Jebel Madsous	5	JMA04	N 28° 31.170'	E 033° 49.874'	1619	NE	40	stone scree, bare rock, small gully.	

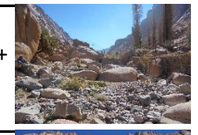
14	12	2014	Jebel Madsous	6	JMA06	N 28° 31.139'	E 033° 50.189'	1524	NE	20	Bare rock & loose stones/gravel	
14	12	2014	Jebel Madsous	7	JMA07	N 28° 31.289'	E 033° 50.211'	1424	NE	15	Gully bottom. Rocks & sand/gravel between.	
22	11	2014	Jebel Musa steps	12	JM12	N 28° 33.017'	E 033° 58.612'	1774	N	15	Bare rock and scattered stones to west side of wadi.	
22	11	2014	Jebel Musa steps	3	JM03	N 28° 32.769'	E 033° 58.576'	1962	NE	35	Bare rock with loose stones & small gravel patches.	
22	11	2014	Jebel Musa steps	1	JM01	N 28° 32.690'	E 033° 58.507'	2007	NE	0	Flat gravel area below the dam at Farsh Elijah. Bordered by bare red rock to the west.	
22	11	2014	Jebel Musa steps	2	JM02	N 28° 32.731'	E 033° 58.548'	1984	E	<5	Boulders at top of gully. Dirt and rocks in between. Relatively flat ledge area below bare rock gully walls.	
22	11	2014	Jebel Musa steps	4	JM04	N 28° 32.780'	E 033° 58.578'	1955	NE	30	Slope, boulders 1-2m, gravel & dirt in between.	
22	11	2014	Jebel Musa steps	5	JM05	N 28° 32.778'	E 033° 58.614'	1923	NE	15	Wide gully bottom. Next to bare rock to north. Floor few boulders ~2m, rocks and gravel.	
22	11	2014	Jebel Musa steps	6	JM06	N 28° 32.802'	E 033° 58.632'	1907	NE	30	Rock gully. Bare rock steps.	
22	11	2014	Jebel Musa steps	7	JM07	N 28° 32.819'	E 033° 58.636'	1896	N	<5	Gorge below old church. Sides bare rock. Floor san/gravel & scattered stones.	
22	11	2014	Jebel Musa steps	8	JM08	N 28° 32.879'	E 033° 58.646'	1871	N	15	Wadi bottom. Large boulder floor ~0.5m, stones in between.	
22	11	2014	Jebel Musa steps	9	JM09	N 28° 32.925'	E 033° 58.637'	1849	N	10	Wadi bottom, boulders 0.5-2m & sand/gravel patches.	
22	11	2014	Jebel Musa steps	10	JM10	N 28° 32.951'	E 033° 58.633'	1823	N	15	Center of wadi, boulders ~1m, dirt in between.	

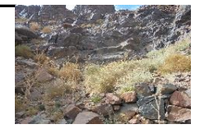
22	11	2014	Jebel Musa steps	11	JM11	N 28° 32.988'	E 033° 58.621'	1799	N	10	Side of wadi to west wall (bare rock). Floor dirt & scattered stones.	
27	11	2014	Jebel Musa steps (cont.)	13	JM13	N 28° 33.022'	E 033° 58.621'	1753	N	10	Wadi bottom. Center, large boulders 1-3m, loose rocks & dirt in between.	
27	11	2014	Jebel Musa steps (cont.)	14	JM14	N 28° 33.052'	E 033° 58.617'	1724	N	15	Wadi bottom, center, large boulders 1-3m, stones & dirt in between. Site over-hung by large ~7m boulder.	
27	11	2014	Jebel Musa steps (cont.)	15	JM15	N 28° 33.078'	E 033° 58.610'	1702	N	<5	Flat area of sand & gravel, by west gorge vertical wall- bare rock. Boulders ~3m in pile, up slope.	
27	11	2014	Jebel Musa steps (cont.)	16	JM16	N 28° 33.124'	E 033° 58.594'	1674	N	20	Slope on side of wadi, towards base, boulders/rocks 0.5-2m, gravel & dirt patches.	
27	11	2014	Jebel Musa steps (cont.)	17	JM17	N 28° 33.147'	E 033° 58.572'	1654	N	25	Slope to west of wadi. Loose stone scree over dirt. Stones ~0.5/1m.	
27	11	2014	Jebel Musa steps (cont.)	18	JM18	N 28° 33.179'	E 033° 58.563'	1624	N	20	Side slope west of wadi. Loose stones over dirt. Some bare rock.	
27	11	2014	Jebel Musa steps (cont.)	19	JM19	N 28° 33.203'	E 033° 58.557'	1605	NE	10	Slope. Bare rock, scattered stones & gravel. 2 Boulders ~2m.	
25	11	2014	Jebel UmShauma	5	US05	N 28° 21.686'	E 033° 55.162'	2405	NE	15	Wadi bottom. Down slope of 6m boulder, floor; rock scree over dirt.	
25	11	2014	Jebel UmShauma	4	US04	N 28° 21.658'	E 033° 55.139'	2449	NE	30	Steep wadi gully, site against west wall, bare rock. Floor stone scree over dirt.	
25	11	2014	Jebel UmShauma	3	US03	N 28° 21.661'	E 033° 55.080'	2509	NE	25	Steep bare rock slope. Few stones & very small gravel patches.	
25	11	2014	Jebel UmShauma	1	US01	N 28° 21.705'	E 033° 55.031'	2580	NE	<5	Flat ledge at summit of UmShauma. Dirt, stones, bare rock & boulders. Bordered to NW by ~4m bare rock outcrop.	
25	11	2014	Jebel UmShauma	2	US02	N 28° 21.692'	E 033° 55.040'	2566	E	25	Steep bare rock slope. Boulders 1-2m, very small gravel patches in between.	

25	11	2014	Jebel UmShauma	6	US06	N 28° 21.738'	E 033° 55.196'	2337	E	10	West side of wadi slope, loose rock, gravel & dust. Below ~10m bare rock vertical face to SW.	
25	11	2014	Jebel UmShauma	7	US07	N 28° 21.764'	E 033° 55.220'	2304	NE	15	Wadi bottom, center, boulders ~2-3m. Loose stones & sand between.	
25	11	2014	Jebel UmShauma	8	US08	N 28° 21.800'	E 033° 55.256'	2252	N	20	Center of wadi, loose large stones, rocks, dirt below.	
25	11	2014	Jebel UmShauma	9	US09	N 28° 21.867'	E 033° 55.247'	2199	NE	20	West slope of wadi to side of main gully. Hillside. Stones ~0.5m with dirt in between.	
25	11	2014	Jebel UmShauma	10	US10	N 28° 21.921'	E 033° 55.293'	2148	NE	25	Slope to west of wadi, gully, small boulders ~1m loose stones & gravel/dirt in between.	
25	11	2014	Jebel UmShauma	11	US11	N 28° 21.928'	E 033° 55.351'	2111	NE	15	Bottom of wadi, center, water course, small pool. Bare rock sides with stones & dirt patches.	
25	11	2014	Jebel UmShauma	12	US12	N 28° 22.052'	E 033° 55.420'	2049	NW	15	East slope of wadi, towards base. Rock scree over dirt & gravel. 1 large boulder size ~4m above site.	
5	12	2014	Jiddat alAlayaat	1	JAL01	N 28° 24.746'	E 033° 51.309'	1594	N	<5	Top of saddle. Red rock. Above gully. Stones & gravel over bare rock.	
5	12	2014	Jiddat alAlayaat	2	JAL02	N 28° 24.768'	E 033° 51.323''	1569	N	35	Gully center. Black rock seam through site. Loose stone scree.	
5	12	2014	Jiddat alAlayaat	3	JAL03	N 28° 24.808'	E 033° 51.344'	1544	N	15	Center of gully. Red & black rocks. Bare rock & loose stone scree.	
5	12	2014	Jiddat alAlayaat	4	JAL04	N 28° 24.841'	E 033° 51.362'	1521	N	5	Center of gully. Red rock. Stones, sand & gravel. Some bare rock gully sides ~2m high.	
5	12	2014	Jiddat alAlayaat	5	JAL05	N 28° 24.901'	E 033° 51.346'	1497	N	5	Near base of gully. Bare rock side ~3-4m. Floor sand & small boulders ~1m, some scattered stones.	

5	12	2014	Jiddat alAlayaat	6	JAL06	N 28° 24.957'	E 033° 51.315'	1480	W	<5	Main wadi. Wide sand bottom.	
19	11	2014	Ras Bahria (Jebel Bab trip)	9	JB09	N 28° 32.149'	E 033° 52.583'	1980	NW	15	Bare rock at foot of bare rock outcrop. Floor bare rock scattered boulders ~1m & gravel patches.	
9	10	2014	Shegif Romana Shimal	2	SGRS02	N 28° 36.950'	E 033° 55.345'	1686	SE	5	Bare rock. Next to west wall of gully.	
9	10	2014	Shegif Romana Shimal	3	SGRS03	N 28° 36.840'	E 033° 55.408'	1642	N	5	Gully base. Farsh area. Near garden wall. Sand & stones in gully bottom. 1 large boulder ~3m.	
9	10	2014	Shegif Romana Shimal	1	SGRS01	N 28° 37.064'	E 033° 55.283'	1739	SE	5	Gully. Very high bare rock walls. Floor gravel, bare rock & stones.	
3	11	2014	Wadi Abu Himan	1	WAH01	N 28° 32.745'	E 033° 57.032'	1729	N	20	Center of wadi at start; join to Wadi Arebein. Boulders 1-3m, rock pile & gravel patches.	
3	11	2014	Wadi Abu Himan	2	WAH02	N 28° 32.680'	E 033° 57.018'	1792	N	10	Small water pools. Large boulders 1-2m. Site overshadowed by massive 5-10m boulders to the south. Small rocks & gravel patches. Water retaining wall.	
3	11	2014	Wadi Abu Himan	3	WAH03	N 28° 32.621'	E 033° 57.035'	1853	N	30	East slope of wadi. High near bare-rock line. Stone scree & rocks 50cm-1m. Near ridge top of side gully.	
3	11	2014	Wadi Abu Himan	4	WAH04	N 28° 32.570'	E 033° 56.973'	1901	N	25	Centre wadi bottom. Boulders 2-3m & rocks, small gravel patches in between. Edges of wadi steep/vertical bare rock gorge ~5m from quadrat.	
3	11	2014	Wadi Abu Himan	5	WAH05	N 28° 32.521'	E 033° 56.951'	1956	N	<5	Center of wadi bottom. Flat area next to bare rock face/dry waterfall. Gravel. Stones. Few large boulders 2-3m.	
3	11	2014	Wadi Abu Himan	6	WAH06	N 28° 32.406'	E 033° 56.910'	2094	N	20	Top of wadi. Gorge opens onto farsh. Large boulders 1-3m. Rocks and a few small sand/gravel patches in between. Near East side gorge bare vertical rock to 10-15m.	
3	11	2014	Wadi Abu Himan	7	WAH07	N 28° 32.505'	E 033° 56.924'	2006	NE	30	West slope wadi, near bare rock line. Rocks ~0.5m, stone & gravel patches.	

29	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	1	WAT01	N 28° 34.967'	E 033° 53.214'	1737	NW	10	Side of wadi next to bottom. Bare rock, sand & loose stones.	
29	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	2	WAT02	N 28° 34.872'	E 033° 53.255'	1764	N	5	West side of gully. Sand & scattered stones. 3 boulders ~2m. Water course down center of wadi with water.	
29	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	3	WAT03	N 28° 34.731'	E 033° 53.399'	1789	W	10	Side gully off wadi near join to main wadi. Bare rock, some loose ravel & stones.	
29	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	4	WAT04	N 28° 34.556'	E 033° 53.467'	1801	NW	<5	Bottom of wadi beside old garden wall. Gravel floor & scattered stones.	
29	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	5	WAT05	N 28° 34.418'	E 033° 53.662'	1825	SW	10	Side of wadi next to garden. Bare rock crack. Small sand/gravel patches.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	6	WAT06	N 28° 33.604'	E 033° 54.002'	1996	N	0	Head of wadi at join to black rock. Gully/gorge steep rock sides. Sand/gravel & loose stone floor. Flat ledge.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	7	WAT07	N 28° 33.641'	E 033° 54.008'	1974	NE	10	Wadi bottom. Gorge, floor loose rocks, boulders 1-2m. Gravel patches. Mix red & black rocks.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	8	WAT08	N 28° 33.695'	E 033° 54.046'	1951	NE	5	Gorge/rock gully. Bare red rock, sand & small boulder patch ~0.5-1.5m.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	9	WAT09	N 28° 33.758'	E 033° 54.134'	1921	N	10	Wadi bottom, cut-through bare rock, gravel patches & loose stones.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	10	WAT10	N 28° 33.835'	E 033° 54.125'	1898	N	15	Bottom of wadi, sand & loose stones. Slope to side. Bare rock vertical face.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	11	WAT11	N 28° 34.015'	E 033° 54.039'	1870	NW	0	Flat area beside garden. Gravel & sand.	
30	11	2014	Wadi Abu Tweita (Galt alAzrak trip)	12	WAT12	N 28° 34.161'	E 033° 53.921'	1850	N	10	Gentle slope in wadi bottom, wide. Bare rock, gravel & scattered stones.	

7	11	2014	Wadi Ajramia	1	WJ01	N 28° 34.993'	E 033° 56.743'	1646	SE	10	Base of wadi opening onto Wadi Raha. Next to bare rock small waterfall (dry). Boulders 0.5-2m. 1 big 4m boulders.	
7	11	2014	Wadi Ajramia	2	WJ02	N 28° 35.074'	E 033° 56.717'	1710	SE	30	Wadi bottom, against East wall; bare rock. Very large 6m boulder in middle of quad. Gravel patches & stones ~0.5m surrounding.	
7	11	2014	Wadi Ajramia	3	WJ03	N 28° 35.121'	E 033° 56.687'	1766	SE	40	Wadi bottom. Next to west wall, steep/vertical, bare rock. Black rock seam: dry waterfall. Stone & gravel at base. Large boulders 1.5-3m higher up.	
7	11	2014	Wadi Ajramia	4	WJ04	N 28° 35.151'	E 033° 56.644'	1822	NE	25	Top of wadi; breaks into 3 gullies. To the west. Large stones, rocks & gravel. Small patches of bare rock. Center of gully.	
7	11	2014	Wadi Ajramia	6	WJ06	N 28° 35.232'	E 033° 56.504'	1929	NE	20	Side slope of farsh/top of wadi. Sand, gravel & stones to 0.5m. Below rock wall-bare.	
30	10	2014	Wadi Arbein	1	WA01	N 28° 33.018'	E 033° 57.006'	1589	NE	20	West side wadi slope, near wadi bed. Mostly stones & gravel with a few large boulders ~1m	
30	10	2014	Wadi Arbein	2	WA02	N 28° 33.013'	E 033° 57.072'	1632	SW	10	East side wadi, low slope. Small rocks & gravel.	
30	10	2014	Wadi Arbein	3	WA03	N 28° 32.801'	E 033° 57.068'	1704	N	30	West side wadi. Large boulders 1-3m, rocks lodged in between. Next to entrance gully to Wadi Abu Himan.	
30	10	2014	Wadi Arbein	4	WA04	N 28° 32.871'	E 033° 57.147'	1634	N	<5	Wadi Arbein bed 20m up from water hole. Below garden wall. Sand & stones + few large 2-3m water-smoothed boulders.	
30	10	2014	Wadi Arbein	5	WA05	N 28° 32.663'	E 033° 57.468'	1703	SW	40	East slope of Wadi Arbein above Moses Rock chapel. Large boulders 1-4m & rocks.	
30	10	2014	Wadi Arbein	6	WA06	N 28° 32.569'	E 033° 57.377'	1734	N	25	West side Wadi Arbein. Below bare rock gully. Stones, boulders 1-2m & bare rock, few small gravel patches.	
17	11	2014	Wadi Ariva	6	WAR06	N 28° 34.326'	E 033° 58.978'	1721	N	30	Gully above wadi to farsh. Bare rock walls to east and west. Floor rocks & loose gravel.	

17	11	2014	Wadi Ariva	7	WAR07	N 28° 34.278'	E 033° 58.988'	1781	SE	15	Top of pass above farsh. Bare rock & loose gravel & stones.	
17	11	2014	Wadi Ariva	8	WAR08	N 28° 34.254'	E 033° 59.002'	1761	N	<5	First farsh. Sand floor, large boulders 1-2m & scattered stones. Bare vertical rock to west side ~3m high.	
17	11	2014	Wadi Ariva	9	WAR09	N 28° 34.184'	E 033° 59.007'	1795	N	20	Side gully, bare rock. Moisture at top. Few patches of gravel/loose stones.	
17	11	2014	Wadi Ariva	1	WAR01	N 28° 34.631'	E 033° 58.974'	1476	N	<5	Base of wadi as it opens onto flat plain. Gravel & scattered stones, few boulders 1-2m	
17	11	2014	Wadi Ariva	2	WAR02	N 28° 34.505'	E 033° 58.960'	1526	N	20	Bare rock watercut cadcade. Over-hung by large boulders 3-6m. Sand patch at base.	
17	11	2014	Wadi Ariva	4	WAR04	N 28° 34.400'	E 033° 58.959'	1627	N	30	Steep wadi bed, stones & small boulders ~1m. 1/3 site bare rock. Small patches of dirt between the rocks.	
17	11	2014	Wadi Ariva	5	WAR05	N 28° 34.363'	E 033° 58.968'	1677	N	35	Steep rock gully. Bare rock & few loose stones & gravel.	
17	11	2014	Wadi Ariva	10	WAR10	N 28° 34.163'	E 033° 58.987'	1804	N	10	Old terraced slope next to dry bare rock watercourse. Scattered rocks & dirt/gravel floor. Bounded by steep bare rock wadi walls east and west.	
17	11	2014	Wadi Ariva	11	WAR11	N 28° 34.079'	E 033° 59.007'	1850	N	10	Uper farsh area. Below side gully of bare rocks. Floor; stones up to 0.5m & gravel patches.	
17	11	2014	Wadi Ariva	12	WAR12	N 28° 34.019'	E 033° 59.018'	1871	N	<5	Top farsh. Ground dirt & scattered stones. Bare rock to west of site.	
17	11	2014	Wadi Ariva	13	WAR13	N 28° 33.900'	E 033° 59.004'	1938	N	20	Top of pass above farsh. Bare rock sides canyon/peaks. Floor boulders 1-2m & gravel patches.	
17	11	2014	Wadi Ariva	14	WAR14	N 28° 33.965'	E 033° 59.002'	1893	N	25	Gully above farsh. West & east walls bare rock, site to east side wall. Floor bare rock & small boulders ~0.5m.	
19	11	2014	Wadi Bahria (Jebel Bab trip)	10	JB10	N 28° 32.266'	E 033° 52.670'	1943	N	20	Wadi bare rock wall to south west. Floor of site rock scree & bare rock.	
19	11	2014	Wadi Bahria (Jebel Bab trip)	11	JB11	N 28° 32.364'	E 033° 52.730'	1870	N	5	Center of wadi gorge cut. Bare rock both sides. Over-hung upstream by ~7m bulder. Floor boulders ~2-3m & sand patches.	

19	11	2014	Wadi Bahria (Jebel Bab trip)	12	JB12	N 28° 32.454'	E 033° 52.770'	1798	NE	15	Center of lower wadi. 2 large boulders ~6m surrounding site. Floor boulders & rocks 0.5-2m, sand patches in between.	
10	11	2014	Wadi Breka (Itlah)	1	WB01	N 28° 34.732'	E 033° 55.471'	1452	N	15	Base of wadi, bottom boulders 102m, rock scree, sand & gravel patches.	
10	11	2014	Wadi Breka (Itlah)	2	WB02	N 28° 34.665'	E 033° 55.418'	1502	N	15	Center of wadi, bottom; rocks & sand patches. Surrounded by large boulders 4-6m.	
10	11	2014	Wadi Breka (Itlah)	3	WB03	N 28° 34.614'	E 033° 55.361'	1549	NE	10	Center of wadi, bottom stones ~0.5m, few large boulders 2-3m, small sand patches between.	
10	11	2014	Wadi Breka (Itlah)	4	WB04	N 28° 34.586'	E 033° 55.305'	1604	NE	20	Wadi bottom. Flatter slope between 2 waterfalls (dry) upstream and downstream; ~10m vertical bare rock. Floor bare rock, few boulders 0.5-2m & small sand patches.	
10	11	2014	Wadi Breka (Itlah)	5	WB05	N 28° 34.574'	E 033° 55.273'	1652	NE	20	Above previous waterfall (dry) rocks & boulders 0.6-2m in bottom of gully, few sand patches.	
10	11	2014	Wadi Breka (Itlah)	6	WB06	N 28° 34.549'	E 033° 55.250'	1679	NW	20	Top of gully. Bare rock and boulders. Further up impassable. Narrow gully (hence quadrat shape) bare rock sides & boulders & rocks on bottom 0.5-1.5m.	
26	10	2014	Wadi Ferah	1	WF01	N 28° 33.099'	E 033° 57.456'	1751	NE	25	West slope wadi. Boulders with gravel & stone patches. Below gully in bare rock.	
26	10	2014	Wadi Ferah	2	WF02	N 28° 33.115'	E 033° 57.499'	1750	W	10	E slope wadi. Near wadi bottom. Sparse rocks, boulders & lots of gravel and sand	
26	10	2014	Wadi Ferah	3	WF03	N 28° 32.899'	E 033° 57.680'	1823	SW	40	Wadi Ferah East slope wadi. Steep boulder and scree slope	
26	10	2014	Wadi Ferah	4	WF04	N 28° 32.875'	E 033° 57.644'	1801	NE	30	West slope wadi. Mostly boulders 1-2m. Stones & gravel between. Beow a gully.	

27	10	2014	Wadi Ferah	6	WF06	N 28° 32.807'	E 033° 57.863'	1870	SW	30	East slope wadi. Rock scree & boulders 1-2m. Beside gully to Safsafa garden.	
27	10	2014	Wadi Ferah	7	WF07	N 28° 32.858'	E 033° 57.868'	1931	S	40	West slope wadi. Pass to Safsafa gardens. Gully. Boulders 1m & rock scree patches.	
27	10	2014	Wadi Ferah	8	WF08	N 28° 32.928'	E 033° 57.877'	2007	S	45	West slope wadi. Pass to Safsafa gardens. Steep gully. Rocks & boulders 0.5-1m.	
27	10	2014	Wadi Ferah	5	WF05	N 38° 32.707'	E 033° 57.759'	1836m	N	35	West slope wadi. Gully to a pass between bare rock. Rock scree, a few boulders & some bare rock.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	1	WG01	N 28° 32.298'	E 033° 55.237'	1914	NW	5	Relatively flat open farsh area Ahebit Nada. Gravel & small stones.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	2	WG02	N 28° 32.246'	E 033° 55.143'	1912	NW	5	SE side of open area. Gentle slope, loose stones & gravel over bare rock.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	3	WG03	N 28° 32.217'	E 033° 55.062'	1907	W	10	Small waterway/dry gully. SE side of wadi. Dirt/gravel floor with scattered stones.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	5	WG05	N 28° 32.108'	E 033° 54.803'	1889	SW	<5	Wadi bottom. Sand and scattered stones.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	6	WG06	N 28° 32.078'	E 033° 54.749'	1888	N	10	Shallow side gully on south side of wadi. Gravel & loose stone floor. Near to bottom/join to main wadi.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	7	WG07	N 28° 32.063'	E 033° 54.679'	1887	SE	15	North side of wadi, just above bottom. Loose stones over dirt.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	8	WG08	N 28° 31.994'	E 033° 54.501'	1875	W	<5	Wadi bottom, center. Sand & stones.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	9	WG09	N 28° 31.937'	E 033° 54.313'	1876	SE	15	North slope of wadi just above bottom. Some bare rock, gravel & loose stones.	

28	11	2014	Wadi Gebal (Galt alAzrak trip)	10	WG10	N 28° 32.229'	E 033° 53.901'	2011	SW	20	Top of side gully/wadi above gardens. Bare rock (red) & stone scree/gravel.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	11	WG11	N 28° 32.153'	E 033° 53.933'	1965	S	20	Steep slope in large gully/small wadi (same as prev.) Bare rock, gravel/dirt patches & boulders 1-2m.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	12	WG12	N 28° 32.076'	E 033° 53.945'	1910	SW	10	Gully/wadi center. Few boulders 1-2m. Stones & gravel floor.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	13	WG13	N 28° 31.990'	E 033° 53.981'	1885	SE	5	Near base of gully/wadi join to main wadi gebal. Bare rock, sand & few scattered stones.	
29	11	2014	Wadi Gebal (Galt alAzrak trip)	15	WG15	N 28° 32.849'	E 033° 52.718'	1768	NE	<5	Wadi bottom. Sand & bare rock.	
29	11	2014	Wadi Gebal (Galt alAzrak trip)	16	WG16	N 28° 32.620'	E 033° 52.518'	1717	NW	0	Pool below bare rock cliff & boulders ~10m high. Floor sand.	
28	11	2014	Wadi Gebal (Galt alAzrak trip)	4	WG04	N 28° 32.136'	E 033° 54.859'	1891	NW	<5	Gully going down from Ahebit Nada. Below dam. Boulders ~1-2m. Stones, dry mud & sand.	
29	11	2014	Wadi Gebal (Galt alAzrak trip)	14	WG14	N 28° 32.164'	E 033° 53.148'	1792	NE	<5	Wadi bottom. Sand & scattered stones.	
19	11	2014	Wadi Gebal (Jebel Bab trip)	1	JB01	N 28° 31.723'	E 033° 53.037'	1856	E	<5	West slope of wadi gebal. Bare rock site with large boulders bordering (5-6m). Small patches of gravel.	
5	11	2014	Wadi Itlah-Wadi Taybeh Al Fal	1	WTF01	N 28° 35.878'	E 033° 54.865'	1377	N	25	Bottom of Wadi Itlah next to Nasr's garden. Mostly sand. Water in small stream. Few boulders ~1m. Next to rock East wall of wadi.	
5	11	2014	Wadi Itlah-Wadi Taybeh Al Fal	2	WTF02	N 28° 35.802'	E 033° 54.632'	1418	E	20	Bottom of Wadi Taybeh Al Fal off Wadi Itlah. Stones and small boulders up to 1.5m, interspersed small gravel/sand patches.	
5	11	2014	Wadi Itlah-Wadi Taybeh Al Fal	3	WTF03	N 28° 35.802'	E 033° 54.529'	1470	E	20	Bottom of wadi Taybeh Al Fal. Rocks & boulders up to 1m. Small sand & gravel patches between.	

5	11	2014	Wadi Itlah-Wadi Taybeh Al Fal	4	WTF04	N 28° 35.779'	E 033° 54.410'	1572	NE	35	Top of ridge between wadis. Bare rock & stone scree.	
5	11	2014	Wadi Itlah-Wadi Taybeh Al Fal	5	WTF05	N 28° 35.797'	E 033° 54.320'	1621	E	35	Gully next to north wall- bare rock~30m high. Loor rocks ~0.5m, dusty soil & stones between.	
5	11	2014	Wadi Itlah-Wadi Taybeh Al Fal	6	WTF06	N 28° 35.799'	E 033° 54.279'	1654	NE	15	By south wall 3m rock wall, end of gully. No pass higher. Below crack in bare rock. Rock scree & small ~1m boulders. Small gravel patches.	
4	11	2014	Wadi Itlah-Wadi Tufah	1	WT01	N 28° 34.990'	E 033° 55.349'	1421	NE	30	West side wadi itlah. Near base across track from gardens in bottom of wadi. Start of slope from path. Bare rock with a few stones and gravel.	
4	11	2014	Wadi Itlah-Wadi Tufah	2	WT02	N 28° 34.899'	E 033° 55.245'	1477	NE	20	West side slope of wadi itlah. Towards tufah. Gravel and stone loose over bare rock.	
4	11	2014	Wadi Itlah-Wadi Tufah	3	WT03	N 28° 34.813'	E 033° 55.194'	1530	E	10	Centre of Wadi Tufah. Large boulders 2-5m. Patches of sand in between. Wadi bottom full of boulders.	
4	11	2014	Wadi Itlah-Wadi Tufah	4	WT04	N 28° 34.736'	E 033° 55.127'	1624	NE	35	Side gully off west slope Wadi Tufah. Rock scree & boulders 0.5-2m. Gully between bare rock walls ~5m high.	
4	11	2014	Wadi Itlah-Wadi Tufah	5	WT05	N 28° 34.773'	E 033° 55.113'	1596	E	15	Centre Wadi Tufah bottom. Boulders 1-2m rocks & gravel patches.	
4	11	2014	Wadi Itlah-Wadi Tufah	6	WT06	N 28° 34.708'	E 033° 55.044'	1674	N	30	Wadi Tufah bottom, towards East side. Boulders 2-4m, stones & small gravel batches in between.	
4	11	2014	Wadi Itlah-Wadi Tufah	7	WT07	N 28° 34.662'	E 033° 55.999'	1732	NE	20	Wadi Tufah near top. Centre wadi bottom near west wall. Overshadowed by huge 6m boulder to south (upslope). Floor boulders 0.5-2m, stones in betweenwith a little sand & gravel.	
4	11	2014	Wadi Itlah-Wadi Tufah	8	WT08	N 28° 34.585'	E 033° 55.922'	1832	NE	20	East side wadi tufah. Top of pass onto farsh. Rocks 0.5-2m. Stones between and fine dust soil.	

21	11	2014	Wadi Jebel Ahmar	1	WJA01	N 28° 32.024'	E 033° 57.897'	1792	N	5	Off wadi Arbein where road splits to Jebel Katherine. Slight slope, rocks & gravel, mix black & red stones.	
21	11	2014	Wadi Jebel Ahmar	2	WJA02	N 28° 31.950'	E 033° 57.849'	1810	NE	10	Base of wadi Ahmar. Riverbed, boulders 1-3m. Stones & gravel between. Mix black & red rock.	
21	11	2014	Wadi Jebel Ahmar	3	WJA03	N 28° 31.901'	E 033° 57.767'	1852	NE	10	Next to east black rock wall. Bottom of wadi, small boulders 0.5-1m & small sand/gravel patches.	
21	11	2014	Wadi Jebel Ahmar	4	WJA04	N 28° 31.898'	E 033° 57.705'	1901	S	20	Side gully to north side of wadi. Bare rock, scattered stones & sand patches. Red rock onwards.	
21	11	2014	Wadi Jebel Ahmar	5	WJA05	N 28° 31.938'	E 033° 57.686'	1954	E	15	Top of gully. Bare red rock & boulders 1-2m. Few small sand patches.	
21	11	2014	Wadi Jebel Ahmar	6	WJA06	N 28° 31.864'	E 033° 57.576'	2007	NE	25	Back in main wadi bottom. Gully cut. Bare red rock to west side. Floor boulders 1-3m, stones & gravel in between.	
21	11	2014	Wadi Jebel Ahmar	7	WJA07	N 28° 31.832'	E 033° 57.558'	2060	N	30	High gully off main wadi. Bare red rock & stone scree.	
21	11	2014	Wadi Jebel Ahmar	8	WJA08	N 28° 31.848'	E 033° 57.438'	2094	E	<5	Farsh Ahmar. Few boulders 1-2m. Sand & stones on floor.	
21	11	2014	Wadi Jebel Ahmar	9	WJA09	N 28° 31.983'	E 033° 57.343'	2156	SE	<5	Wide gully above farsh, connecting to 2nd higher farsh. Seam of black rock. Bare black rock, scattered stones. 3 large red boulders 3-4m.	
21	11	2014	Wadi Jebel Ahmar	10	WJA10	N 28° 32.011'	E 033° 57.258'	2199	NE	10	Top of farsh below bare rock summit. Boulder pile, boulders 2-3m beside bare red rock. Some gravel patches.	
21	11	2014	Wadi Jebel Ahmar	12	WJA12	N 28° 32.061'	E 033° 57.145'	2290	NE	<5	Farsh at summit of Jebel Ahmar. Surrounded by bare smooth red rock. Floor sand & gravel.	
21	11	2014	Wadi Jebel Ahmar	13	WJA13	N 28° 32.082'	E 033° 57.151'	2287	NE	<5	Same farsh as previous, opposite end. North end. Floor gravel & sand. 1 boulder 2m in site.	

21	11	2014	Wadi Jebel Ahmar	14	WJA14	N 28° 32.070'	E 033° 57.092'	2312	E	<5	Strip of gravel/small stones in bare rock by summit. Hence long strip transect.
21	11	2014	Wadi Jebel Ahmar	15	WJA15	N 28° 32.064'	E 033° 57.269'	2188	SE	0	Farsh. Flat gravel & dirt floor site next to bare rock outcrop to west. 
12	11	2014	Wadi Loger	6	WL06	N 28° 34.972'	E 033° 58.175'	1749	SE	10	Gentle slope, gravel & stones. Bottom of wadi. Few boulders; ~1m. 1 larger ~2m.
12	11	2014	Wadi Loger	7	WL07	N 28° 35.084'	E 033° 58.197'	1829	N	10	Farsh at top of wadi. Bare rock above. Gentle sloping ground. Gravel floor & small scattered rocks.
12	11	2014	Wadi Loger	1	WL01	N 28° 34.598'	E 033° 58.420'	1490	SE	<5	Base of wadi as it opens out onto flat before road. Next to farm. Rocks ~0.5m, stones/pebbles & sand/gravel floor.
12	11	2014	Wadi Loger	2	WL02	N 28° 34.722'	E 033° 58.298'	1541	SE	15	Bottom of wadi, large boulders 2-3m, scattered stones & gravel/sand patches.
12	11	2014	Wadi Loger	3	WL03	N 28° 34.784'	E 033° 58.238'	1590	SE	15	Wadi bottom next to east wall; bare rock. Floor; boulders ~1m, sand patch & large 3m boulder.
12	11	2014	Wadi Loger	4	WL04	N 28° 34.835'	E 033° 58.193'	1640	SE	20	Wadi gully, bare rock to east side, boulder/rock slope to west. Boulders in site 1-2m & scattered stones.
12	11	2014	Wadi Loger	5	WL05	N 28° 34.922'	E 033° 58.217'	1693	SW	15	Wadi bottom, boulders 0.5-1m, rocks & gravel.
12	11	2014	Wadi Loger	8	WL08	N 28° 35.091'	E 033° 58.228'	1859	W	20	Rock ledge over farsh. Bare rock & scattered stones.
8	11	2014	Wadi Mserdi	1	WMS01	N 28° 32.942'	E 033° 56.462'	1648	NW	20	East slope of wadi. Above gardens. Boulders 1-2m, stone scree & gravel in between. 
8	11	2014	Wadi Mserdi	2	WMS02	N 28° 32.782'	E 033° 56.401'	1713	N	5	Center of wadi, below large 4-5m boulders. Bare rock to east side. Semi-burried boulders ~2m in sand & scattered pebbles. 
8	11	2014	Wadi Mserdi	3	WMS03	N 28° 32.673'	E 033° 56.403'	1754	NW	<5	Spring below very large ~8m boulder & bare rock. Sand & gravel bounded by bare rockto west & boulders 3-4m to east. 
8	11	2014	Wadi Mserdi	4	WMS04	N 28° 32.611'	E 033° 56.450'	1816	W	30	East slope wadi. Small boulders ~1m, rock scree in between. 

8	11	2014	Wadi Mserdi	5	WMS05	N 28° 32.493'	E 033° 56.503'	1912	W	30	East slope, wadi top at pass. Boulders 0.5-1.5m. Rock & gravel scree in between.	
30	11	2014	Wadi Sagr (Galt alAzrak trip)	1	WSGR01	N 28° 34.467'	E 033° 53.850'	1825	N	<5	Wadi bottom. Sand, gravel & loose scattered stones. Near a well.	
30	11	2014	Wadi Sagr (Galt alAzrak trip)	2	WSGR02	N 28° 34.602'	E 033° 53.979'	1776	N	10	Wadi bottom, center. Gravel/sand. Boulders ~0.5-2m. 1 large boulder ~4m.	
30	11	2014	Wadi Sagr (Galt alAzrak trip)	3	WSGR03	N 28° 34.926'	E 033° 54.073'	1725	NW	5	Wadi bottom. Small pool. Sand. Boulders 1-2m.	
6	11	2014	Wadi Shag	1	WSG01	N 28° 35.419'	E 033° 54.808'	1369	NW	30	East slope Wadi Shag. Start of slope above wadi bed. Loose rock scree & dirt/gravel. 1 boulder ~2m.	
6	11	2014	Wadi Shag	2	WSG02	N 28° 35.363'	E 033° 54.688'	1436	SE	<5	Wadi Shag bed, towards west side. Large boulders 2-4m, bare rock, pebbles & sand patches in between.	
6	11	2014	Wadi Shag	3	WSG03	N 28° 35.293'	E 033° 54.575'	1481	NE	<5	Beside west wall of wadi. Gorge like. Riverbed pebbles & a few boulders 1-2m, sand & gravel. Bare rock at west wall.	
6	11	2014	Wadi Shag	4	WSG04	N 28° 35.203'	E 033° 54.453'	1539	NE	<5	Wadi bottom. Next to gorge wall to North: steep/vertical bare rock. Wadi bed; sand, pebbles & few boulders 103m.	
6	11	2014	Wadi Shag	5	WSG05	N 28° 35.110'	E 033° 54.307'	1612	NE	20	Along path. Vertical gorge wall to SE, steep drop to wadi bottom (~15m) opposite. %m strip. Bare rock & dirt/gravel.	
6	11	2014	Wadi Shag	6	WSG06	N 28° 35.038'	E 033° 54.160'	1679	NE	<5	Bottom of wadi bed, below waterfall pool. Trickle of water down rocks. Sand & stones. Small boulders up to 1.5m.	
24	10	2014	Wadi Shraj-Safsafa	1	WS01	N 28° 33.591'	E 033° 57.442'	1522	NW	25	East side slope. Gully. Boulders 50cm-1m, rocks & gravel	
24	10	2014	Wadi Shraj-Safsafa	2	WS02	N 28° 33.549'	E 033° 57.448'	1569	NW	25	Wadi East side. Slope. Large 2-3m boulders, bare rock & gravel	

24	10	2014	Wadi Shraj-Safsafa	3	WS03	N 28° 33.454'	E 033° 57.463'	1618	NW	30	Wadi east side. Boulder slope. Steep. Many 1-2m boulders & small gravel patches	
24	10	2014	Wadi Shraj-Safsafa	4	WS04	N 28° 33.485'	E 033° 57.530'	1646	NW	35	Wadi east side. Steep slope. Site in a gully. Bare rock & large 2-3m boulders & stones	
25	10	2014	Wadi Shraj-Safsafa	5	WS05	N 28° 33.593'	E 033° 57.357'	1546	SE	20	West slope wadi. Gully. Stones gravel & 1-1.5m high bare rock gully side.	
25	10	2014	Wadi Shraj-Safsafa	6	WS06	N 28° 33.491'	E 033° 57.321'	1573	E	25	West slope wadi. Mostly bare rock. Stone & gravel patches. Steep rock faces.	
25	10	2014	Wadi Shraj-Safsafa	7	WS07	N 28° 33.381'	E 033° 57.327'	1629	N	25	West side wadi. Gully. Bare rock, boulders 1m, stones & gravel.	
25	10	2014	Wadi Shraj-Safsafa	8	WS08	N 28° 33.311'	E 033° 57.335'	1700	N	40	West slope wadi. Very steep, bare rock & stone scree.	
28	10	2014	Wadi Shwebi	1	WSH01	N 28° 33.754'	E 033° 57.908'	1525	NE	<5	Entrance to Wadi Shwebi. Open ground. Sand & fine gravel. A few scattered rocks & small boulders.	
28	10	2014	Wadi Shwebi	2	WSH02	N 28° 33.724'	E 033° 57.046'	1531	N	10	Wadi Shwebi East & West sides. Gorge. Vertical walls; bare rock, up to 4m high. Bed of wadi boulders 1-2m & few stones and gravel patches.	
28	10	2014	Wadi Shwebi	3	WSH03	N 28° 33.649'	E 033° 57.940'	1565	E	25	West slope wadi Shwebi. Gravel and sand with few scattered boulders 1-2m.	
28	10	2014	Wadi Shwebi	4	WSH04	N 28° 33.515'	E 033° 57.940'	1649	N	40	west and East sides of wadi. Gorge, sides vertical bare rock up to 5m high. Bottom full of boulders 1-2m. Below Shwebi spring	
29	10	2014	Wadi Shwebi	5	WSH05	N 28° 33.497'	E 033° 57.898'	1686	NE	25	Side gully Wadi Shwebi west side. Large boulders 1-3m & rocks. Few patches of fine sand/dry mud. Bordered by bare rock on east side (5-10m high)	

29	10	2014	Wadi Shwebi	6	WSH06	N 28° 33.436'	E 033° 57.941'	1747	N	35	West side of Wadi Shwebi. Bare rock side. Gully. Stones & boulders 1-2m. Few small gravel/dirt patches.	
29	10	2014	Wadi Shwebi	7	WSH07	N 28° 33.367'	E 033° 57.938'	1838	N	40	West side Wadi Shwebi. Below thin bare-rock gully. Boulders 1-2m & rock scree.	
29	10	2014	Wadi Shwebi	8	WSH08	N 28° 33.322'	E 033° 57.980'	1905	NE	40	West side Wadi Shwebi. Gully. Large rocks 0.5-1m & small stone patches. Bounded to west by bare rock wall up to 15m high.	
29	10	2014	Wadi Shwebi	9	WSH09	N 28° 33.284'	E 033° 57.983'	1987	N	30	Top of Wadi Shwebi. East side of wadi, wall bare rock 15-20m high. Boulders.	
11	11	2014	Wadi Telah-Wadi Rars	1	WT101	N 28° 33.941'	E 033° 55.857'	1585	NE	10	Start of side wadi off Telah (Rars). Above gardens in base of Telah. Gully cut through bare rock sides. Stones, small boulders ~0.5m, & grave/sand patches.	
11	11	2014	Wadi Telah-Wadi Rars	2	WT102	N 28° 33.879'	E 033° 55.753'	1641	NW	15	South side slope of wadi. Gentle slope, gravel and stones up to 0.5m. Below area of larger boulders 1-2m & bare rock out crop.	
11	11	2014	Wadi Telah-Wadi Rars	3	WT103	N 28° 33.808'	E 033° 55.702'	1706	N	20	Center of wadi gully. Vertical rock wall to west20-30m high. Gully bottom large rocks and bouoders up to 2m. Rocks ~0.5m.	
11	11	2014	Wadi Telah-Wadi Rars	5	WT105	N 28° 33.727'	E 033° 55.619'	1832	N	15	Next to bare rock west wall height to ~30m+. Site between 2 very large 5-6m boulders up and down slope. Ground rocks & stones.	
19	11	2014	Wadi Zaatar (Jebel Bab trip)	8	JB08	N 28° 32.120'	E 033° 52.032'	1992	NW	<5	Flat farsh area. Bare rock extrusions covered with sand/gravel.	

Supporting information to the paper Coals et al. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high mountain flora. Journal of Vegetation Science. Appendix Table S5. Species abundance for quadrats surveyed in 2014.

	Quadrat code	Species	Individual number per quadrat
1	AP01	Scariola_orientalis	42
2	AP01	Diplotaxis_harra	3
3	AP01	Seraphidium_herbaalba	2
4	AP01	Alkanna_orientalis	8
5	AP01	Achillea_fragrantissima	46
6	AP01	Tanacetum_sinaicum	2
7	AP01	Deverra_triradiata	1
8	AP01	Plantago_sinaica	2
9	AP01	Matthiola_longipetala	9
10	AP01	Deverra_tortuosa	1
11	AP01	Chiliadenus_montanus	20
12	AP01	Zilla_spinosa	1
13	AP01	Peganum_harmala	6
14	AP01	Teucrium_polium	3
15	AP01	Galium_setaceum	4
16	AP01	Phlomis_aurea	4
17	AP01	Helianthemum_ellipticum	1
18	AP01	Juncus_rigidus	1
19	AP01	Echinops_glaberrimus	1
20	AP02	Matthiola_longipetala	14
21	AP02	Stachys_aegyptiaca	12
22	AP02	Fagonia_arabica	68
23	AP02	Teucrium_polium	1
24	AP02	Chiliadenus_montanus	4
25	AP02	Fagonia_mollis	16
26	AP02	Seraphidium_herbaalba	3
27	AP02	Gymnocarpus_decandrum	1
28	AP02	Centaurea_scoparia	4
29	AP02	Deverra_tortuosa	1
30	AP03	Polygala_sinaica	1
31	AP03	Lappula_sinaica	2
32	AP03	Stachys_aegyptiaca	11
33	AP03	Seraphidium_herbaalba	2
34	AP03	Fagonia_arabica	2
35	AP03	Ballota_undulata	2
36	AP03	Zilla_spinosa	6
37	AP03	Diplotaxis_harra	12
38	AP03	Alkanna_orientalis	8
39	AP03	Deverra_tortuosa	1
40	AP03	Chiliadenus_montanus	2
41	AP03	Tanacetum_sinaicum	3

42	AP03	Diplotaxis_acris	1
43	AP03	Deverra_triradiata	1
44	AP03	Matthiola_longipetala	15
45	AP03	Stipa_parviflora	2
46	AP03	Gomphocarpus_sinaicus	2
47	AP03	Carduus_pycnocephalus	1
48	AP03	Verbascum_decaisneanum	2
49	AP03	Echinops_glaberrimus	1
50	AP04	Verbascum_decaisneanum	2
51	AP04	Diplotaxis_harra	11
52	AP04	Pulicaria_undulata	23
53	AP04	Stachys_aegyptiaca	21
54	AP04	Tanacetum_sinaicum	2
55	AP04	Zilla_spinosa	2
56	AP04	Verbascum_sinaiticum	5
57	AP04	Seraphidium_herbaalba	4
58	AP04	Ephedra_alata	1
59	AP04	Carduus_pycnocephalus	2
60	AP04	Alkanna_orientalis	1
61	AP05	Centaurea_scoparia	7
62	AP05	Seraphidium_herbaalba	3
63	AP05	Zilla_spinosa	26
64	AP05	Carduus_pycnocephalus	3
65	AP05	Matthiola_longipetala	3
66	AP05	Diplotaxis_harra	5
67	AP05	Lappula_sinaica	22
68	AP06	Ballota_undulata	2
69	AP06	Zilla_spinosa	16
70	AP06	Chiliadenus_montanus	3
71	AP06	Seraphidium_herbaalba	4
72	AP06	Diplotaxis_harra	15
73	AP06	Tanacetum_sinaicum	2
74	AP06	Stachys_aegyptiaca	1
75	AP06	Lappula_sinaica	2
76	AP07	Ephedra_alata	1
77	AP07	Diplotaxis_harra	16
78	AP07	Ballota_undulata	3
79	AP07	Tanacetum_sinaicum	6
80	AP07	Seraphidium_herbaalba	10
81	AP07	Echinops_spinosus	3
82	AP07	Scariola_orientalis	1
83	AP07	Galium_setaceum	1
84	AP07	Nepeta_septemcrenata	1
85	AP07	Lappula_sinaica	1
86	AP08	Seraphidium_herbaalba	13
87	AP08	Carduus_pycnocephalus	2
88	AP08	Zilla_spinosa	14
89	AP08	Lappula_sinaica	11
90	AP08	Scariola_orientalis	1
91	AP08	Diplotaxis_harra	6

92	AP08	Ephedra_alata	1
93	AP08	Polygala_sinaica	1
94	AP09	Zilla_spinosa	1
95	AP09	Lappula_sinaica	10
96	AP09	Seraphidium_herbaalba	12
97	AP09	Diplotaxis_harra	6
98	AP09	Polygala_sinaica	8
99	AP09	Ballota_undulata	1
100	AP10	Lappula_sinaica	17
101	AP10	Polygala_sinaica	4
102	AP10	Zilla_spinosa	9
103	AP10	Seraphidium_herbaalba	16
104	AP11	Ballota_undulata	7
105	AP11	Zilla_spinosa	4
106	AP11	Lappula_sinaica	4
107	AP11	Tanacetum_sinaicum	3
108	AP11	Seraphidium_herbaalba	2
109	AP11	Carduus_pycnocephalus	1
110	AP12	Colchicum_guessfeldtianum	2
111	AP12	Diplotaxis_harra	8
112	AP12	Seraphidium_herbaalba	1
113	AP12	Polygala_sinaica	1
114	AP12	Ballota_undulata	1
115	AP12	Tanacetum_sinaicum	1
116	AP13	Plantago_sinaica	17
117	AP13	Tanacetum_sinaicum	30
118	AP13	Teucrium_polium	16
119	AP13	Ballota_undulata	1
120	AP13	Thymus_decussatus	3
121	AP13	Stipa_parviflora	14
122	AP13	Cotoneaster_orbicularis	4
123	AP13	Astragalus_echinus	1
124	AP13	Phlomis_aurea	10
125	AP13	Chiliadenus_montanus	1
126	AP13	Pterocephalus_sanctus	1
127	AP13	Crataegus_x_sinaica	1
128	BC01	Achillea_fragrantissima	29
129	BC01	Alkanna_orientalis	5
130	BC01	Plantago_sinaica	1
131	BC01	Echinops_spinosus	3
132	BC01	Verbascum_sinaiticum	4
133	BC01	Tanacetum_sinaicum	2
134	BC01	Galium_setaceum	1
135	BC01	Lepidium_draba	1
136	BC01	Chiliadenus_montanus	1
137	BC01	Matthiola_longipetala	3
138	BC01	Zilla_spinosa	3
139	BC01	Phlomis_aurea	2
140	BC01	Fagonia_mollis	1
141	BC01	Mentha_longifolia	2

142	BC01	Populus_nigra	1
143	BC02	Ephedra_alata	1
144	BC02	Stachys_aegyptiaca	5
145	BC02	Fagonia_arabica	1
146	BC02	Diplotaxis_harra	9
147	BC02	Echinops_spinosus	12
148	BC02	Echinops_glaberrimus	5
149	BC02	Matthiola_longipetala	7
150	BC02	Deverra_tortuosa	3
151	BC02	Seraphidium_herbaalba	5
152	BC02	Origanum_syriacum	4
153	BC02	Phlomis_aurea	2
154	BC02	Centaurea_scoparia	1
155	BC02	Fagonia_mollis	1
156	BC02	Heliotropium_digynum	1
157	BC02	Teucrium_polium	1
158	BC02	Diplotaxis_harra	1
159	BC02	Anarrhinum_pubescens	1
160	BC02	Plantago_sinaica	1
161	BC02	Tanacetum_sinaicum	1
162	BC03	Fagonia_arabica	18
163	BC03	Diplotaxis_harra	9
164	BC03	Teucrium_polium	6
165	BC03	Seraphidium_herbaalba	12
166	BC03	Stachys_aegyptiaca	7
167	BC03	Tanacetum_sinaicum	3
168	BC03	Fagonia_mollis	34
169	BC03	Matthiola_longipetala	9
170	BC03	Chiliadenus_montanus	3
171	BC03	Gymnocarpus_decandrum	63
172	BC03	Astragalus_spinosus	1
173	BC03	Gomphocarpus_sinaicus	1
174	BC03	Globularia_arabica	1
175	BC04	Fagonia_mollis	43
176	BC04	Farsetia_aegyptia	1
177	BC04	Teucrium_polium	2
178	BC04	Diplotaxis_harra	1
179	BC04	Centaurea_scoparia	1
180	BC04	Echinops_glaberrimus	8
181	BC04	Seraphidium_herbaalba	3
182	BC04	Stachys_aegyptiaca	5
183	BC04	Anarrhinum_pubescens	4
184	BC04	Diplotaxis_harra	8
185	BC04	Deverra_tortuosa	5
186	BC04	Echinops_spinosus	5
187	BC04	Matthiola_longipetala	6
188	FAH01	Agathophora_alopecuroides	63
189	FAH01	Diplotaxis_harra	1
190	FAH01	Reaumuria_hirtella	19
191	FAH02	Helianthemum_kahiricum	12

192	FAH02	Chiliadenus_montanus	25
193	FAH02	Verbascum_decaisneanum	5
194	FAH02	Reaumuria_hirtella	7
195	FAH02	Diplotaxis_harra	10
196	FAH02	Deverra_tortuosa	4
197	FAH02	Globularia_arabica	9
198	FAH02	Fagonia_mollis	3
199	FAH02	Tanacetum_sinaicum	7
200	FUS01	Pterocephalus_sanctus	11
201	FUS01	Tanacetum_sinaicum	22
202	FUS01	Phlomis_aurea	17
203	FUS01	Echinops_spinosus	1
204	FUS01	Plantago_sinaica	3
205	FUS01	Teucrium_polium	6
206	FUS01	Diplotaxis_harra	18
207	FUS01	Nepeta_septemcrenata	4
208	FUS01	Pistacia_khinjuk	1
209	FUS01	Crataegus_x_sinaica	1
210	FUS01	Salvia_multicaulis	12
211	FUS01	Verbascum_sinaiticum	1
212	FUS01	Rhamnus_dispermus	1
213	FUS01	Zilla_spinosa	2
214	FUS01	Chiliadenus_montanus	2
215	FUS01	Thymus_decussatus	2
216	FUS01	Globularia_arabica	2
217	GAZ01	Diplotaxis_harra	47
218	GAZ01	Centaurea_eryngioides	7
219	GAZ01	Galium_setaceum	4
220	GAZ01	Chiliadenus_montanus	3
221	GAZ01	Gymnocarpus_decandrum	2
222	GAZ01	Reaumuria_hirtella	14
223	GAZ01	Globularia_arabica	6
224	GAZ01	Seraphidium_herbaalba	1
225	GAZ01	Iphiona_mucronata	1
226	GAZ02	Tanacetum_sinaicum	3
227	GAZ02	Globularia_arabica	2
228	GAZ02	Chiliadenus_montanus	4
229	GAZ02	Diplotaxis_harra	20
230	GAZ02	Galium_setaceum	1
231	GAZ02	Seraphidium_herbaalba	2
232	GAZ02	Polygala_sinaica	1
233	GAZ02	Echinops_spinosus	1
234	GAZ03	Teucrium_polium	1
235	GAZ03	Diplotaxis_harra	48
236	GAZ03	Tanacetum_sinaicum	5
237	GAZ03	Echinops_spinosus	3
238	GAZ03	Chiliadenus_montanus	7
239	GAZ03	Seraphidium_herbaalba	7
240	GAZ03	Silene_schimperiana	3
241	GAZ03	Reaumuria_hirtella	2

242	GAZ03	Globularia_arabica	3
243	GAZ03	Anarrhinum_pubescens	1
244	GAZ03	Polygala_sinaica	1
245	GAZ03	Galium_setaceum	1
246	GAZ04	Echinops_spinosus	6
247	GAZ04	Teucrium_polium	2
248	GAZ04	Tanacetum_sinaicum	1
249	GAZ04	Phlomis_aurea	6
250	GAZ04	Centaurea_eryngioides	7
251	GAZ04	Diplotaxis_harra	4
252	GAZ04	Anarrhinum_pubescens	2
253	GAZ04	Globularia_arabica	2
254	GAZ04	Phagnalon_nitidum	7
255	GAZ04	Origanum_syriacum	2
256	GAZ04	Silene_schimperiana	2
257	GAZ04	Echinops_glaberrimus	1
258	GAZ04	Stachys_aegyptiaca	1
259	GAZ05	Diplotaxis_harra	25
260	GAZ05	Stachys_aegyptiaca	10
261	GAZ05	Echinops_glaberrimus	7
262	GAZ05	Globularia_arabica	2
263	GAZ05	Farsetia_aegyptia	4
264	GAZ05	Deverra_tortuosa	2
265	GAZ05	Fagonia_mollis	10
266	GAZ05	Deverra_triradiata	3
267	GAZ05	Pistacia_khinjuk	1
268	GAZ05	Seraphidium_herbaalba	2
269	GAZ05	Verbascum_decaisneanum	1
270	GAZ05	Gymnocarpus_decandrum	1
271	GAZ05	Lappula_sinaica	2
272	GAZ05	Echinops_spinosus	2
273	GAZ05	Galium_setaceum	1
274	GAZ06	Plantago_sinaica	1
275	GAZ06	Diplotaxis_harra	16
276	GAZ06	Echinops_spinosus	17
277	GAZ06	Deverra_tortuosa	2
278	GAZ06	Stachys_aegyptiaca	16
279	GAZ06	Scariola_orientalis	1
280	GAZ06	Seraphidium_herbaalba	3
281	GAZ06	Fagonia_mollis	5
282	GAZ06	Farsetia_aegyptia	3
283	GAZ06	Gymnocarpus_decandrum	3
284	GAZ06	Globularia_arabica	3
285	GAZ06	Centaurea_eryngioides	5
286	GAZ06	Chiliadenus_montanus	1
287	GAZ07	Stachys_aegyptiaca	5
288	GAZ07	Farsetia_aegyptia	7
289	GAZ07	Silene_linearis	1
290	GAZ07	Galium_setaceum	4
291	GAZ07	Centaurea_eryngioides	6

292	GAZ07	Gymnocarpus_decandrum	3
293	GAZ07	Chiliadenus_montanus	5
294	GAZ07	Globularia_arabica	1
295	GAZ07	Echinops_spinosus	3
296	GAZ07	Plantago_sinaica	1
297	GAZ07	Pistacia_khinjuk	1
298	GAZ08	Phlomis_aurea	1
299	GAZ08	Pistacia_khinjuk	2
300	GAZ08	Globularia_arabica	3
301	GAZ08	Deverra_tortuosa	3
302	GAZ08	Diplotaxis_harra	1
303	GAZ08	Origanum_syriacum	7
304	GAZ08	Echinops_spinosus	3
305	GAZ08	Plantago_sinaica	2
306	GAZ08	Centaurea_eryngioides	4
307	GAZ08	Rubus_sanctus	13
308	GAZ08	Ficus_palmata	3
309	GAZ08	Mentha_longifolia	4
310	GAZ08	Chiliadenus_montanus	5
311	GAZ08	Galium_setaceum	3
312	GAZ08	Heliotropium_digynum	1
313	GAZ08	Heliotropium_arbainense	1
314	GAZ08	Foeniculum_vulgare	3
315	GAZ08	Adiantum_capillus-veneris	3
316	GAZ09	Phoenix_dactylifera	1
317	GAZ09	Equisetum_ramosissimum	6
318	GAZ09	Foeniculum_vulgare	2
319	GAZ09	Phlomis_aurea	1
320	GAZ09	Achillea_fragrantissima	4
321	GAZ09	Plantago_sinaica	1
322	HHL01	Fagonia_mollis	10
323	HHL01	Helianthemum_kahiricum	20
324	HHL01	Globularia_arabica	21
325	HHL01	Diplotaxis_harra	7
326	HHL01	Echinops_spinosus	2
327	HHL01	Deverra_tortuosa	1
328	HHL01	Stachys_aegyptiaca	2
329	HHL01	Chiliadenus_montanus	2
330	JAL01	Fagonia_mollis	54
331	JAL01	Gymnocarpus_decandrum	27
332	JAL01	Diplotaxis_harra	2
333	JAL01	Farsetia_aegyptia	1
334	JAL01	Fagonia_arabica	3
335	JAL01	Cleome_droserifolia	1
336	JAL02	Reaumuria_hirtella	5
337	JAL02	Fagonia_mollis	38
338	JAL02	Diplotaxis_harra	6
339	JAL02	Seraphidium_herbaalba	5
340	JAL02	Echinops_spinosus	1
341	JAL02	Lappula_sinaica	1

342	JAL02	Farsetia_aegyptia	1
343	JAL02	Gymnocarpus_decandrum	5
344	JAL02	Carduus_pycnocephalus	1
345	JAL02	Zilla_spinosa	1
346	JAL03	Seraphidium_herbaalba	11
347	JAL03	Diplotaxis_harra	8
348	JAL03	Gymnocarpus_decandrum	2
349	JAL03	Fagonia_mollis	9
350	JAL03	Farsetia_aegyptia	1
351	JAL03	Iphiona_mucronata	1
352	JAL03	Tanacetum_sinaicum	1
353	JAL03	Ephedra_alata	1
354	JAL04	Seraphidium_herbaalba	9
355	JAL04	Diplotaxis_harra	7
356	JAL04	Gymnocarpus_decandrum	6
357	JAL04	Lappula_sinaica	1
358	JAL04	Silene_schimperiana	1
359	JAL04	Deverra_tortuosa	2
360	JAL04	Farsetia_aegyptia	2
361	JAL04	Ballota_undulata	1
362	JAL05	Fagonia_mollis	13
363	JAL05	Reaumuria_hirtella	1
364	JAL05	Diplotaxis_harra	8
365	JAL05	Seraphidium_herbaalba	3
366	JAL05	Centaurea_scoparia	1
367	JAL05	Ephedra_alata	2
368	JAL06	Tamarix_aphylla	1
369	JAL06	Zilla_spinosa	7
370	JAL06	Fagonia_mollis	10
371	JAL06	Seraphidium_herbaalba	5
372	JAL06	Gymnocarpus_decandrum	1
373	JAL06	Diplotaxis_harra	2
374	JAL06	Centaurea_scoparia	1
375	JAL06	Retama_raetam	1
376	JAL06	Artemisia_judaica	1
377	JAL06	Ochradenus_baccatus	1
378	JB01	Chiliadenus_montanus	1
379	JB01	Diplotaxis_harra	6
380	JB01	Plantago_sinaica	2
381	JB01	Globularia_arabica	7
382	JB01	Phlomis_aurea	1
383	JB01	Ballota_undulata	2
384	JB01	Heliotropium_arbainense	2
385	JB01	Origanum_syriacum	1
386	JB02	Diplotaxis_harra	1
387	JB02	Mentha_longifolia	21
388	JB02	Juncus_rigidus	13
389	JB02	Crataegus_x_sinaica	1
390	JB02	Ficus_palmata	1
391	JB02	Verbascum_sinaiticum	1

392	JB02	Plantago_sinaica	1
393	JB03	Diplotaxis_harra	18
394	JB03	Teucrium_polium	26
395	JB03	Chiliadenus_montanus	1
396	JB03	Astragalus_spinosus	1
397	JB03	Centaurea_eryngioides	1
398	JB03	Galium_setaceum	1
399	JB03	Colchicum_guessfeldtianum	1
400	JB03	Phagnalon_nitidum	2
401	JB03	Gomphocarpus_sinaicus	1
402	JB04	Tanacetum_sinaicum	2
403	JB04	Polygala_sinaica	4
404	JB04	Diplotaxis_harra	11
405	JB04	Seraphidium_herbaalba	7
406	JB04	Echinops_glaberrimus	2
407	JB04	Deverra_tortuosa	5
408	JB04	Ballota_undulata	3
409	JB04	Ephedra_alata	1
410	JB04	Chiliadenus_montanus	1
411	JB05	Centaurea_ammocyanus	5
412	JB05	Diplotaxis_harra	27
413	JB05	Tanacetum_sinaicum	12
414	JB05	Teucrium_polium	6
415	JB05	Silene_schimperiana	4
416	JB05	Deverra_tortuosa	1
417	JB05	Echinops_glaberrimus	4
418	JB05	Phlomis_aurea	4
419	JB05	Ballota_undulata	2
420	JB05	Rhamnus_dispermus	1
421	JB05	Phagnalon_nitidum	1
422	JB05	Galium_setaceum	2
423	JB06	Teucrium_polium	13
424	JB06	Echinops_glaberrimus	2
425	JB06	Diplotaxis_harra	44
426	JB06	Farsetia_aegyptia	1
427	JB06	Nepeta_septemcrenata	1
428	JB06	Chiliadenus_montanus	9
429	JB06	Tanacetum_sinaicum	5
430	JB06	Galium_setaceum	7
431	JB06	Plantago_sinaica	13
432	JB06	Silene_linearis	2
433	JB06	Verbascum_decaisneanum	1
434	JB06	Alkanna_orientalis	2
435	JB06	Phagnalon_nitidum	2
436	JB06	Silene_schimperiana	2
437	JB06	Lappula_sinaica	3
438	JB06	Gymnocarpus_decandrum	1
439	JB06	Ballota_undulata	1
440	JB07	Diplotaxis_harra	23
441	JB07	Teucrium_polium	12

442	JB07	Pterocephalus_sanctus	2
443	JB07	Silene_schimperiana	3
444	JB07	Lappula_sinaica	8
445	JB07	Galium_setaceum	5
446	JB07	Echinops_glaberrimus	2
447	JB07	Polygala_sinaica	1
448	JB07	Zilla_spinosa	4
449	JB07	Farsetia_aegyptia	1
450	JB07	Alkanna_orientalis	1
451	JB08	Colchicum_guessfeldtianum	5
452	JB08	Teucrium_polium	47
453	JB08	Plantago_sinaica	9
454	JB08	Pterocephalus_sanctus	1
455	JB08	Tanacetum_sinaicum	2
456	JB08	Verbascum_decaisneanum	4
457	JB08	Diplotaxis_harra	11
458	JB08	Chiliadenus_montanus	4
459	JB08	Zilla_spinosa	1
460	JB08	Phlomis_aurea	3
461	JB08	Crataegus_x_sinaica	1
462	JB08	Galium_setaceum	3
463	JB09	Tanacetum_sinaicum	11
464	JB09	Plantago_sinaica	65
465	JB09	Diplotaxis_harra	25
466	JB09	Teucrium_polium	10
467	JB09	Salvia_multicaulis	9
468	JB09	Chiliadenus_montanus	7
469	JB09	Phlomis_aurea	1
470	JB09	Galium_setaceum	2
471	JB09	Globularia_arabica	2
472	JB09	Pterocephalus_sanctus	1
473	JB10	Polygala_sinaica	3
474	JB10	Tanacetum_sinaicum	14
475	JB10	Chiliadenus_montanus	3
476	JB10	Diplotaxis_harra	18
477	JB10	Teucrium_polium	2
478	JB10	Scariola_orientalis	6
479	JB10	Echinops_glaberrimus	3
480	JB10	Pterocephalus_sanctus	1
481	JB10	Verbascum_decaisneanum	2
482	JB10	Plantago_sinaica	3
483	JB10	Silene_schimperiana	1
484	JB10	Echinops_spinosus	3
485	JB10	Globularia_arabica	1
486	JB10	Centaurea_eryngioides	2
487	JB10	Galium_setaceum	3
488	JB10	Silene_linearis	1
489	JB10	Ballota_undulata	1
490	JB11	Origanum_syriacum	5
491	JB11	Echinops_glaberrimus	2

492	JB11	Echinops_spinosus	1
493	JB11	Tanacetum_sinaicum	2
494	JB11	Verbascum_decaisneanum	1
495	JB11	Phlomis_aurea	1
496	JB11	Stipa_parviflora	1
497	JB11	Nepeta_septemcrenata	1
498	JB11	Silene_linearis	1
499	JB11	Crataegus_x_sinaica	1
500	JB11	Galium_setaceum	1
501	JB11	Plantago_sinaica	2
502	JB11	Cotoneaster_orbicularis	1
503	JB12	Thymus_decussatus	3
504	JB12	Tanacetum_sinaicum	3
505	JB12	Echinops_glaberrimus	4
506	JB12	Stipa_parviflora	13
507	JB12	Stachys_aegyptiaca	5
508	JB12	Origanum_syriacum	1
509	JB12	Phlomis_aurea	9
510	JB12	Pterocephalus_sanctus	3
511	JB12	Chiliadenus_montanus	1
512	JB12	Ficus_palmata	1
513	JB12	Zilla_spinosa	1
514	JB12	Crataegus_x_sinaica	4
515	JB12	Globularia_arabica	2
516	JB12	Echinops_spinosus	2
517	JB12	Cotoneaster_orbicularis	3
518	JB12	Alkanna_orientalis	1
519	JB12	Plantago_sinaica	3
520	JB12	Teucrium_polium	1
521	JB12	Diplotaxis_harra	3
522	JDR01	Fagonia_mollis	1
523	JDR01	Iphiona_scabra	4
524	JDR01	Stachys_aegyptiaca	1
525	JDR01	Matthiola_longipetala	3
526	JDR01	Fagonia_arabica	16
527	JDR01	Verbascum_decaisneanum	1
528	JDR01	Chiliadenus_montanus	3
529	JDR01	Deverra_tortuosa	2
530	JDR01	Seraphidium_herbaalba	1
531	JDR01	Teucrium_polium	1
532	JDR02	Teucrium_polium	3
533	JDR02	Gymnocarpus_decandrum	1
534	JDR02	Tanacetum_sinaicum	2
535	JDR02	Galium_setaceum	1
536	JDR02	Anarrhinum_pubescens	1
537	JDR03	Lycium_shawii	5
538	JDR03	Stachys_aegyptiaca	5
539	JDR03	Echinops_glaberrimus	6
540	JDR03	Deverra_tortuosa	9
541	JDR03	Achillea_fragrantissima	6

542	JDR03	Verbascum_decaisneanum	1
543	JDR03	Matthiola_longipetala	2
544	JDR03	Echinops_spinosus	1
545	JDR03	Fagonia_mollis	1
546	JDR03	Teucrium_polium	3
547	JDR03	Seraphidium_herbaalba	2
548	JDR03	Centaurea_scoparia	4
549	JDR03	Scariola_orientalis	1
550	JDR03	Zilla_spinosa	2
551	JDR03	Tanacetum_sinaicum	1
552	JDR03	Phlomis_aurea	1
553	JDR03	Chiliadenus_montanus	1
554	JDR03	Gymnocarpus_decandrum	1
555	JDR03	Origanum_syriacum	1
556	JDR04	Echinops_spinosus	6
557	JDR04	Seraphidium_herbaalba	3
558	JDR04	Centaurea_scoparia	2
559	JDR04	Deverra_tortuosa	2
560	JDR04	Fagonia_mollis	3
561	JDR04	Matthiola_longipetala	2
562	JDR04	Zilla_spinosa	1
563	JDR05	Pulicaria_undulata	69
564	JDR05	Matthiola_longipetala	15
565	JDR05	Zilla_spinosa	23
566	JDR05	Verbascum_sinaiticum	4
567	JDR05	Fagonia_mollis	4
568	JDR05	Juncus_rigidus	7
569	JDR05	Reseda_pruinosa	1
570	JDR05	Gymnocarpus_decandrum	1
571	JDR05	Centaurea_scoparia	1
572	JDR05	Gomphocarpus_sinaicus	1
573	JDR05	Heliotropium_digynum	1
574	JDR05	Pulicaria_incisa	2
575	JDR05	Fagonia_arabica	8
576	JDR05	Deverra_tortuosa	1
577	JDR05	Chiliadenus_montanus	1
578	JDR06	Plantago_sinaica	1
579	JDR06	Tanacetum_sinaicum	12
580	JDR06	Echinops_spinosus	3
581	JDR06	Origanum_syriacum	3
582	JDR06	Nepeta_septemcrenata	8
583	JDR06	Teucrium_polium	3
584	JDR06	Phlomis_aurea	2
585	JDR06	Pterocephalus_sanctus	1
586	JDR06	Zilla_spinosa	1
587	JDR07	Gymnocarpus_decandrum	3
588	JDR07	Zilla_spinosa	12
589	JDR07	Fagonia_arabica	9
590	JDR07	Phlomis_aurea	1
591	JDR07	Stachys_aegyptiaca	1

592	JDR07	Centaurea_scoparia	2
593	JDR07	Matthiola_longipetala	1
594	JDR07	Echinops_spinosus	1
595	JDR07	Launaea_spinosa	1
596	JDR07	Echinops_glaberrimus	1
597	JDR07	Callipeltis_cucullaris	4
598	JDR08	Zilla_spinosa	10
599	JDR08	Origanum_syriacum	3
600	JDR08	Stachys_aegyptiaca	2
601	JDR08	Nepeta_septemcrenata	2
602	JDR08	Echinops_glaberrimus	1
603	JDR08	Centaurea_scoparia	8
604	JDR08	Matthiola_longipetala	3
605	JDR08	Teucrium_polium	1
606	JDR08	Fagonia_arabica	1
607	JDR08	Fagonia_mollis	1
608	JDR08	Callipeltis_cucullaris	12
609	JDR08	Deverra_tortuosa	1
610	JDR08	Launaea_spinosa	1
611	JDR08	Chiliadenus_montanus	1
612	JHA01	Fagonia_mollis	60
613	JHA01	Fagonia_bruguieri	4
614	JHA01	Artemisia_judaica	7
615	JHA01	Anabasis_articulata	1
616	JHA01	Zilla_spinosa	1
617	JHA01	Alhagi_graecorum	13
618	JHA01	Peganum_harmala	2
619	JHA02	Fagonia_mollis	55
620	JHA02	Fagonia_arabica	15
621	JHA02	Anabasis_articulata	7
622	JHA02	Ochradenus_baccatus	1
623	JHA02	Seraphidium_herbaalba	1
624	JHA02	Zilla_spinosa	2
625	JHA02	Teucrium_polium	1
626	JHA02	Chiliadenus_montanus	2
627	JHA02	Diplotaxis_harra	1
628	JHA02	Helianthemum_kahiricum	1
629	JHA03	Zilla_spinosa	5
630	JHA03	Retama_raetam	2
631	JHA03	Anabasis_articulata	4
632	JHA03	Ephedra_alata	1
633	JHA03	Farsetia_aegyptia	3
634	JHA03	Reaumuria_hirtella	3
635	JHA03	Helianthemum_kahiricum	4
636	JHA03	Diplotaxis_harra	3
637	JHA03	Alkanna_orientalis	1
638	JHA03	Iphiona_scabra	1
639	JHA03	Origanum_syriacum	1
640	JHA04	Launaea_spinosa	4
641	JHA04	Ochradenus_baccatus	1

642	JHA04	Iphiona_scabra	1
643	JHA04	Fagonia_arabica	2
644	JHA04	Diplotaxis_harra	6
645	JHA04	Globularia_arabica	1
646	JHA04	Artemisia_judaica	1
647	JHA04	Zilla_spinosa	3
648	JHA04	Callipeltis_cucullaris	3
649	JHA04	Stachys_aegyptiaca	3
650	JHA04	Tanacetum_sinaicum	1
651	JHA05	Agathophora_alopecuroides	11
652	JHA05	Diplotaxis_harra	11
653	JHA05	Fagonia_mollis	1
654	JHA05	Fagonia_arabica	22
655	JHA05	Anabasis_articulata	4
656	JHA05	Iphiona_scabra	2
657	JHA05	Ephedra_alata	1
658	JHA05	Farsetia_aegyptia	2
659	JHA05	Zilla_spinosa	1
660	JHA05	Deverra_tortuosa	1
661	JHA05	Reaumuria_hirtella	1
662	JHA05	Anarrhinum_pubescens	1
663	JHA06	Phlomis_aurea	1
664	JHA06	Globularia_arabica	1
665	JHA06	Stachys_aegyptiaca	3
666	JHA06	Zilla_spinosa	9
667	JHA06	Ochradenus_baccatus	3
668	JHA06	Verbascum_decaisneanum	1
669	JHA06	Helianthemum_kahiricum	2
670	JHA06	Ephedra_alata	2
671	JHA06	Centaurea_scoparia	3
672	JHA06	Echinops_spinosus	2
673	JHA06	Fagonia_arabica	1
674	JHA06	Seraphidium_herbaalba	1
675	JHA06	Tanacetum_sinaicum	1
676	JHA06	Deverra_tortuosa	1
677	JHA06	Diplotaxis_harra	8
678	JHA06	Cleome_droserifolia	1
679	JHA06	Iphiona_scabra	2
680	JHA06	Fagonia_mollis	2
681	JHA07	Verbascum_decaisneanum	1
682	JHA07	Seraphidium_herbaalba	1
683	JHA07	Fagonia_arabica	1
684	JHA07	Zilla_spinosa	12
685	JHA07	Iphiona_scabra	3
686	JHA07	Echinops_spinosus	2
687	JHA07	Phlomis_aurea	1
688	JHA07	Alkanna_orientalis	1
689	JHA07	Helianthemum_kahiricum	2
690	JHA07	Ballota_undulata	1
691	JHA07	Farsetia_aegyptia	3

692	JHA07	Origanum_syriacum	1
693	JHA07	Diplotaxis_acris	3
694	JHA07	Deverra_tortuosa	1
695	JHA07	Chiliadenus_montanus	1
696	JHA08	Seraphidium_herbaalba	1
697	JHA08	Stachys_aegyptiaca	3
698	JHA08	Alkanna_orientalis	1
699	JHA08	Zilla_spinosa	8
700	JHA08	Echinops_glaberrimus	4
701	JHA08	Echinops_spinosus	6
702	JHA08	Deverra_tortuosa	1
703	JHA08	Diplotaxis_acris	3
704	JHA08	Retama_raetam	1
705	JHA08	Phlomis_aurea	1
706	JHA08	Ephedra_alata	1
707	JHA08	Fagonia_arabica	3
708	JHA08	Heliotropium_digynum	1
709	JHA09	Crataegus_x_sinaica	6
710	JHA09	Echinops_glaberrimus	3
711	JHA09	Echinops_spinosus	9
712	JHA09	Alkanna_orientalis	2
713	JHA09	Deverra_tortuosa	1
714	JHA09	Seraphidium_herbaalba	1
715	JHA09	Teucrium_polium	3
716	JHA09	Juncus_rigidus	6
717	JHA09	Phlomis_aurea	1
718	JHA09	Plantago_sinaica	1
719	JHA09	Mentha_longifolia	10
720	JHA09	Adiantum_capillus-veneris	3
721	JHA09	Ficus_palmata	1
722	JHA09	Origanum_syriacum	1
723	JHA10	Zilla_spinosa	16
724	JHA10	Deverra_tortuosa	3
725	JHA10	Seraphidium_herbaalba	3
726	JHA10	Verbascum_decaisneanum	1
727	JHA10	Gomphocarpus_sinaicus	1
728	JHA10	Phlomis_aurea	1
729	JHA10	Scariola_orientalis	2
730	JHA10	Plantago_sinaica	8
731	JHA10	Helianthemum_kahiricum	2
732	JHA10	Diplotaxis_harra	1
733	JHA10	Teucrium_polium	1
734	JHA10	Fagonia_mollis	2
735	JHA10	Echinops_spinosus	2
736	JHA10	Stachys_aegyptiaca	4
737	JHA10	Diplotaxis_acris	1
738	JHA10	Reaumuria_hirtella	1
739	JK01	Seraphidium_herbaalba	24
740	JK01	Peganum_harmala	1
741	JK01	Matthiola_longipetala	1

742	JK01	Fagonia_mollis	6
743	JK02	Seraphidium_herbaalba	2
744	JK02	Teucrium_polium	1
745	JK02	Polygala_sinaica	1
746	JK02	Alkanna_orientalis	10
747	JK02	Tanacetum_sinaicum	2
748	JK02	Gomphocarpus_sinaicus	2
749	JK02	Matthiola_longipetala	7
750	JK02	Echinops_spinosus	2
751	JK02	Scariola_orientalis	1
752	JK02	Anarrhinum_pubescens	1
753	JK03	Origanum_syriacum	5
754	JK03	Seraphidium_herbaalba	2
755	JK03	Phlomis_aurea	1
756	JK03	Echinops_spinosus	11
757	JK03	Scariola_orientalis	5
758	JK03	Alkanna_orientalis	14
759	JK03	Chiliadenus_montanus	2
760	JK03	Fagonia_mollis	1
761	JK03	Carduus_pycnocephalus	7
762	JK03	Ballota_undulata	1
763	JK03	Echinops_glaberrimus	2
764	JK03	Achillea_fragrantissima	4
765	JK03	Tanacetum_sinaicum	4
766	JK03	Stachys_aegyptiaca	1
767	JK03	Teucrium_polium	1
768	JK03	Silene_linearis	1
769	JK03	Zilla_spinosa	1
770	JK03	Verbascum_sinaiticum	1
771	JK04	Seraphidium_herbaalba	12
772	JK04	Galium_setaceum	3
773	JK04	Ballota_undulata	4
774	JK04	Stachys_aegyptiaca	8
775	JK04	Matthiola_longipetala	24
776	JK04	Gomphocarpus_sinaicus	1
777	JK04	Carduus_pycnocephalus	1
778	JK04	Echinops_spinosus	1
779	JK04	Alkanna_orientalis	4
780	JK04	Zilla_spinosa	5
781	JK05	Ballota_undulata	8
782	JK05	Echinops_spinosus	4
783	JK05	Seraphidium_herbaalba	64
784	JK05	Tanacetum_sinaicum	21
785	JK05	Stachys_aegyptiaca	6
786	JK05	Galium_setaceum	2
787	JK05	Phagnalon_nitidum	1
788	JK05	Diplotaxis_harra	1
789	JK05	Gymnocarpus_decandrum	1
790	JK05	Zilla_spinosa	4
791	JK06	Fagonia_mollis	3

792	JK06	Seraphidium_herbaalba	6
793	JK06	Zilla_spinosa	20
794	JK06	Matthiola_longipetala	15
795	JK06	Echinops_glaberrimus	4
796	JK06	Alkanna_orientalis	1
797	JK06	Stachys_aegyptiaca	24
798	JK06	Phlomis_aurea	6
799	JK06	Carduus_pycnocephalus	7
800	JK06	Gomphocarpus_sinaicus	2
801	JK06	Tanacetum_sinaicum	3
802	JK07	Phlomis_aurea	3
803	JK07	Echinops_spinosus	10
804	JK07	Seraphidium_herbaalba	6
805	JK07	Mentha_longifolia	10
806	JK07	Nepeta_septemcrenata	4
807	JK07	Tanacetum_sinaicum	3
808	JK07	Primula_boveana	32
809	JK07	Ballota_saxatilis	2
810	JK07	Stipa_parviflora	4
811	JK07	Alkanna_orientalis	8
812	JK07	Matthiola_longipetala	3
813	JK07	Teucrium_polium	1
814	JK08	Seraphidium_herbaalba	59
815	JK08	Zilla_spinosa	21
816	JK08	Tanacetum_sinaicum	1
817	JK08	Polygala_sinaica	5
818	JK08	Teucrium_polium	4
819	JK08	Matthiola_longipetala	5
820	JK08	Reseda_pruinosa	1
821	JK09	Rosa_arabica	2
822	JK09	Ballota_undulata	9
823	JK09	Stipa_parviflora	7
824	JK09	Zilla_spinosa	4
825	JK09	Teucrium_polium	2
826	JK09	Pterocephalus_sanctus	1
827	JK09	Seraphidium_herbaalba	11
828	JK09	Tanacetum_sinaicum	44
829	JK09	Scariola_orientalis	1
830	JK09	Nepeta_septemcrenata	3
831	JK09	Juncus_rigidus	3
832	JK09	Verbascum_sinaiticum	23
833	JK10	Crataegus_x_sinaica	5
834	JK10	Phlomis_aurea	5
835	JK10	Tanacetum_sinaicum	32
836	JK10	Seraphidium_herbaalba	14
837	JK10	Verbascum_sinaiticum	1
838	JK10	Pulicaria_inuloides	1
839	JK10	Zilla_spinosa	7
840	JK10	Mentha_longifolia	1
841	JK10	Matthiola_longipetala	3

842	JK10	Alkanna_orientalis	3
843	JK10	Teucrium_polium	2
844	JK10	Echinops_spinosus	2
845	JK10	Ballota_undulata	2
846	JK10	Juncus_rigidus	1
847	JK11	Tanacetum_sinaicum	59
848	JK11	Verbascum_sinaiticum	29
849	JK11	Carduus_pycnocephalus	1
850	JK11	Seraphidium_herbaalba	7
851	JK11	Zilla_spinosa	2
852	JK11	Polygala_sinaica	3
853	JK11	Phlomis_aurea	1
854	JK11	Fagonia_mollis	1
855	JK11	Pterocephalus_sanctus	3
856	JK12	Phlomis_aurea	12
857	JK12	Echinops_spinosus	2
858	JK12	Zilla_spinosa	4
859	JK12	Polygala_sinaica	3
860	JK12	Ballota_undulata	2
861	JK12	Carduus_pycnocephalus	1
862	JK12	Seraphidium_herbaalba	4
863	JK12	Tanacetum_sinaicum	1
864	JK13	Tanacetum_sinaicum	6
865	JK13	Achillea_fragrantissima	1
866	JK13	Ephedra_alata	1
867	JK13	Polygala_sinaica	1
868	JK13	Silene_leucophylla	1
869	JK13	Ballota_undulata	1
870	JK14	Tanacetum_sinaicum	79
871	JK14	Seraphidium_herbaalba	62
872	JK14	Verbascum_sinaiticum	6
873	JK14	Teucrium_polium	1
874	JK14	Alkanna_orientalis	1
875	JK15	Ballota_undulata	8
876	JK15	Seraphidium_herbaalba	8
877	JK15	Tanacetum_sinaicum	45
878	JK15	Carduus_pycnocephalus	1
879	JK15	Teucrium_polium	1
880	JK15	Alkanna_orientalis	1
881	JK16	Tanacetum_sinaicum	11
882	JK16	Seraphidium_herbaalba	22
883	JK16	Polygala_sinaica	17
884	JK16	Lappula_sinaica	8
885	JK16	Teucrium_polium	1
886	JK17	Zilla_spinosa	6
887	JK17	Tanacetum_sinaicum	2
888	JK17	Seraphidium_herbaalba	4
889	JK17	Alkanna_orientalis	2
890	JK17	Phlomis_aurea	1
891	JK17	Peganum_harmala	1

892	JK18	Zilla_spinosa	5
893	JK18	Lappula_sinaica	32
894	JK18	Seraphidium_herbaalba	9
895	JK18	Ballota_undulata	1
896	JK18	Agathophora_alopecuroides	1
897	JK18	Carduus_pycnocephalus	1
898	JK19	Crataegus_x_sinaica	1
899	JK19	Alkanna_orientalis	5
900	JK19	Peganum_harmala	1
901	JK19	Zilla_spinosa	3
902	JK19	Mentha_longifolia	7
903	JK19	Verbascum_sinaiticum	1
904	JK20	Lappula_sinaica	16
905	JK20	Seraphidium_herbaalba	45
906	JK20	Zilla_spinosa	2
907	JK20	Tanacetum_sinaicum	1
908	JK20	Nepeta_septemcrenata	1
909	JK20	Ballota_undulata	4
910	JK20	Carduus_pycnocephalus	1
911	JK21	Seraphidium_herbaalba	53
912	JK21	Chiliadenus_montanus	1
913	JK21	Tanacetum_sinaicum	6
914	JK21	Polygala_sinaica	4
915	JK21	Alkanna_orientalis	3
916	JK21	Zilla_spinosa	1
917	JK21	Lappula_sinaica	17
918	JK21	Carduus_pycnocephalus	1
919	JK21	Matthiola_longipetala	1
920	JK22	Nepeta_septemcrenata	1
921	JK22	Tanacetum_sinaicum	1
922	JK22	Verbascum_decaisneanum	15
923	JK22	Seraphidium_herbaalba	10
924	JK22	Galium_setaceum	1
925	JK22	Chiliadenus_montanus	5
926	JK23	Chiliadenus_montanus	1
927	JK23	Zilla_spinosa	5
928	JK23	Gomphocarpus_sinaicus	2
929	JK23	Carduus_pycnocephalus	18
930	JK23	Alkanna_orientalis	9
931	JK23	Echinops_spinosus	3
932	JK23	Stachys_aegyptiaca	1
933	JK23	Seraphidium_herbaalba	11
934	JK23	Echinops_glaberrimus	1
935	JK23	Ballota_undulata	3
936	JK23	Tanacetum_sinaicum	2
937	JK24	Fagonia_mollis	16
938	JK24	Alkanna_orientalis	2
939	JK24	Zilla_spinosa	7
940	JK24	Seraphidium_herbaalba	19
941	JK24	Stachys_aegyptiaca	1

942	JK24	Teucrium_polium	2
943	JK24	Matthiola_longipetala	1
944	JK24	Diplotaxis_harra	1
945	JK25	Seraphidium_herbaalba	13
946	JK25	Pulicaria_incisa	1
947	JK25	Diplotaxis_harra	1
948	JK25	Tanacetum_sinaicum	1
949	JK25	Matthiola_longipetala	1
950	JK25	Echinops_glaberrimus	1
951	JK25	Chiliadenus_montanus	1
952	JM01	Seraphidium_herbaalba	7
953	JM01	Achillea_fragrantissima	1
954	JM01	Matthiola_longipetala	1
955	JM01	Verbascum_decaisneanum	29
956	JM01	Pulicaria_undulata	22
957	JM01	Tanacetum_sinaicum	3
958	JM01	Alkanna_orientalis	3
959	JM01	Phlomis_aurea	1
960	JM01	Chiliadenus_montanus	2
961	JM01	Caylusea_hexagyna	1
962	JM01	Juncus_rigidus	3
963	JM01	Ficus_palmata	1
964	JM02	Tanacetum_sinaicum	21
965	JM02	Seraphidium_herbaalba	7
966	JM02	Verbascum_decaisneanum	8
967	JM02	Centaurea_scoparia	2
968	JM02	Deverra_tortuosa	1
969	JM02	Phlomis_aurea	3
970	JM02	Teucrium_polium	2
971	JM02	Pulicaria_incisa	1
972	JM02	Ballota_undulata	4
973	JM02	Matthiola_longipetala	1
974	JM02	Gymnocarpus_decandrum	1
975	JM02	Caylusea_hexagyna	1
976	JM03	Tanacetum_sinaicum	25
977	JM03	Phlomis_aurea	4
978	JM03	Echinops_spinosus	2
979	JM03	Silene_schimperiana	1
980	JM03	Verbascum_decaisneanum	1
981	JM03	Centaurea_scoparia	1
982	JM03	Origanum_syriacum	1
983	JM03	Teucrium_polium	1
984	JM03	Deverra_tortuosa	1
985	JM04	Tanacetum_sinaicum	9
986	JM04	Seraphidium_herbaalba	14
987	JM04	Chiliadenus_montanus	1
988	JM04	Echinops_spinosus	2
989	JM04	Matthiola_longipetala	6
990	JM04	Stachys_aegyptiaca	2
991	JM04	Ballota_undulata	1

992	JM04	Echinops_glaberrimus	1
993	JM05	Centaurea_scoparia	4
994	JM05	Tanacetum_sinaicum	32
995	JM05	Phlomis_aurea	2
996	JM05	Seraphidium_herbaalba	5
997	JM05	Echinops_glaberrimus	2
998	JM05	Chiliadenus_montanus	1
999	JM05	Verbascum_decaisneanum	1
1000	JM05	Matthiola_longipetala	2
1001	JM05	Deverra_tortuosa	1
1002	JM05	Zilla_spinosa	2
1003	JM05	Ficus_palmata	1
1004	JM06	Callipeltis_cucullaris	3
1005	JM06	Chiliadenus_montanus	3
1006	JM06	Verbascum_decaisneanum	2
1007	JM06	Matthiola_longipetala	4
1008	JM06	Echinops_spinosus	1
1009	JM06	Plantago_sinaica	1
1010	JM06	Tanacetum_sinaicum	3
1011	JM06	Iphiona_mucronata	2
1012	JM06	Echinops_glaberrimus	1
1013	JM07	Tanacetum_sinaicum	14
1014	JM07	Achillea_fragrantissima	7
1015	JM07	Verbascum_sinaiticum	12
1016	JM07	Stipa_parviflora	1
1017	JM07	Pulicaria_incisa	6
1018	JM07	Thymus_decussatus	5
1019	JM07	Seraphidium_herbaalba	4
1020	JM07	Phlomis_aurea	2
1021	JM07	Galium_setaceum	1
1022	JM07	Ballota_undulata	2
1023	JM07	Echinops_glaberrimus	1
1024	JM07	Echinops_spinosus	1
1025	JM07	Stachys_aegyptiaca	5
1026	JM07	Matthiola_longipetala	1
1027	JM08	Origanum_syriacum	2
1028	JM08	Phlomis_aurea	7
1029	JM08	Tanacetum_sinaicum	4
1030	JM08	Achillea_fragrantissima	4
1031	JM08	Seraphidium_herbaalba	1
1032	JM08	Echinops_spinosus	1
1033	JM08	Echinops_glaberrimus	3
1034	JM08	Crataegus_x_sinaica	1
1035	JM09	Verbascum_sinaiticum	2
1036	JM09	Achillea_fragrantissima	9
1037	JM09	Pulicaria_undulata	1
1038	JM09	Verbascum_decaisneanum	1
1039	JM09	Origanum_syriacum	2
1040	JM09	Phlomis_aurea	3
1041	JM09	Tanacetum_sinaicum	2

1042	JM09	Echinops_spinosus	4
1043	JM09	Alkanna_orientalis	1
1044	JM10	Phlomis_aurea	7
1045	JM10	Achillea_fragrantissima	8
1046	JM10	Echinops_spinosus	7
1047	JM10	Tanacetum_sinaicum	2
1048	JM10	Echinops_glaberrimus	2
1049	JM10	Alkanna_orientalis	2
1050	JM10	Origanum_syriacum	2
1051	JM10	Ballota_undulata	1
1052	JM10	Stachys_aegyptiaca	1
1053	JM11	Tanacetum_sinaicum	17
1054	JM11	Teucrium_polium	1
1055	JM11	Ballota_undulata	9
1056	JM11	Verbascum_sinaiticum	1
1057	JM11	Echinops_spinosus	12
1058	JM11	Origanum_syriacum	1
1059	JM11	Echinops_glaberrimus	2
1060	JM11	Anarrhinum_pubescens	1
1061	JM11	Seraphidium_herbaalba	2
1062	JM11	Alkanna_orientalis	1
1063	JM11	Phlomis_aurea	1
1064	JM12	Verbascum_decaisneanum	1
1065	JM12	Chiliadenus_montanus	3
1066	JM12	Phlomis_aurea	1
1067	JM12	Echinops_spinosus	4
1068	JM12	Galium_setaceum	2
1069	JM12	Ballota_undulata	1
1070	JM12	Tanacetum_sinaicum	4
1071	JM12	Echinops_glaberrimus	2
1072	JM13	Tanacetum_sinaicum	4
1073	JM13	Achillea_fragrantissima	4
1074	JM13	Echinops_spinosus	25
1075	JM13	Phlomis_aurea	6
1076	JM13	Alkanna_orientalis	2
1077	JM13	Origanum_syriacum	4
1078	JM13	Deverra_triradiata	1
1079	JM13	Anarrhinum_pubescens	1
1080	JM14	Ballota_undulata	3
1081	JM14	Echinops_spinosus	11
1082	JM14	Phlomis_aurea	3
1083	JM14	Achillea_fragrantissima	1
1084	JM14	Origanum_syriacum	6
1085	JM14	Nepeta_septemcrenata	1
1086	JM14	Alkanna_orientalis	2
1087	JM14	Tanacetum_sinaicum	1
1088	JM15	Alkanna_orientalis	5
1089	JM15	Deverra_triradiata	1
1090	JM15	Achillea_fragrantissima	1
1091	JM15	Tanacetum_sinaicum	1

1092	JM15	Anarrhinum_pubescens	2
1093	JM15	Origanum_syriacum	3
1094	JM15	Galium_setaceum	9
1095	JM15	Callipeltis_cucullaris	3
1096	JM15	Phlomis_aurea	1
1097	JM15	Plantago_sinaica	1
1098	JM15	Echinops_spinosus	2
1099	JM15	Chiliadenus_montanus	2
1100	JM15	Verbascum_decaisneanum	1
1101	JM15	Stachys_aegyptiaca	3
1102	JM15	Ficus_palmata	1
1103	JM16	Seraphidium_herbaalba	13
1104	JM16	Matthiola_longipetala	2
1105	JM16	Zilla_spinosa	6
1106	JM16	Echinops_glaberrimus	2
1107	JM16	Diplotaxis_harra	4
1108	JM16	Deverra_tortuosa	1
1109	JM16	Achillea_fragrantissima	3
1110	JM17	Achillea_fragrantissima	4
1111	JM17	Diplotaxis_harra	3
1112	JM17	Seraphidium_herbaalba	18
1113	JM17	Tanacetum_sinaicum	1
1114	JM17	Teucrium_polium	8
1115	JM17	Anarrhinum_pubescens	3
1116	JM17	Alkanna_orientalis	1
1117	JM17	Echinops_glaberrimus	1
1118	JM17	Zilla_spinosa	1
1119	JM18	Deverra_triradiata	1
1120	JM18	Seraphidium_herbaalba	5
1121	JM18	Tanacetum_sinaicum	37
1122	JM18	Matthiola_longipetala	4
1123	JM18	Echinops_spinosus	2
1124	JM18	Deverra_tortuosa	2
1125	JM18	Achillea_fragrantissima	9
1126	JM18	Stachys_aegyptiaca	1
1127	JM18	Teucrium_polium	4
1128	JM18	Anarrhinum_pubescens	14
1129	JM18	Ballota_undulata	1
1130	JM18	Diplotaxis_harra	1
1131	JM18	Scariola_orientalis	1
1132	JM18	Chiliadenus_montanus	2
1133	JM19	Tanacetum_sinaicum	30
1134	JM19	Teucrium_polium	11
1135	JM19	Anarrhinum_pubescens	3
1136	JM19	Ballota_undulata	1
1137	JM19	Phlomis_aurea	1
1138	JM19	Matthiola_longipetala	1
1139	JM19	Achillea_fragrantissima	1
1140	JM19	Echinops_glaberrimus	1
1141	JM19	Origanum_syriacum	1

1142	JM19	Alkanna_orientalis	5
1143	JM19	Seraphidium_herbaalba	3
1144	JM19	Deverra_tortuosa	1
1145	JM19	Galium_setaceum	1
1146	JM19	Fagonia_mollis	2
1147	JM19	Chiliadenus_montanus	3
1148	JMA01	Agathophora_alopecuroides	10
1149	JMA01	Seraphidium_herbaalba	3
1150	JMA01	Diplotaxis_harra	20
1151	JMA01	Reaumuria_hirtella	3
1152	JMA01	Farsetia_aegyptia	1
1153	JMA02	Ephedra_alata	4
1154	JMA02	Agathophora_alopecuroides	34
1155	JMA02	Seraphidium_herbaalba	7
1156	JMA02	Diplotaxis_harra	5
1157	JMA02	Deverra_tortuosa	1
1158	JMA02	Diplotaxis_harra	12
1159	JMA02	Fagonia_arabica	9
1160	JMA02	Seraphidium_herbaalba	2
1161	JMA02	Tanacetum_sinaicum	1
1162	JMA02	Echinops_spinosus	1
1163	JMA02	Polygala_sinaica	1
1164	JMA03	Silene_leucophylla	8
1165	JMA03	Diplotaxis_harra	6
1166	JMA03	Fagonia_arabica	3
1167	JMA03	Helianthemum_kahiricum	5
1168	JMA03	Gymnocarpus_decandrum	1
1169	JMA03	Seraphidium_herbaalba	4
1170	JMA03	Ephedra_alata	1
1171	JMA04	Scariola_orientalis	3
1172	JMA04	Ephedra_alata	1
1173	JMA04	Seraphidium_herbaalba	4
1174	JMA04	Diplotaxis_harra	6
1175	JMA04	Farsetia_aegyptia	2
1176	JMA04	Verbascum_decaisneanum	1
1177	JMA04	Echinops_spinosus	1
1178	JMA06	Seraphidium_herbaalba	2
1179	JMA06	Ballota_undulata	3
1180	JMA06	Centaurea_eryngioides	1
1181	JMA06	Scariola_orientalis	5
1182	JMA06	Diplotaxis_harra	2
1183	JMA06	Agathophora_alopecuroides	10
1184	JMA06	Echinops_spinosus	3
1185	JMA06	Ephedra_alata	1
1186	JMA06	Farsetia_aegyptia	4
1187	JMA06	Zilla_spinosa	1
1188	JMA07	Phagnalon_nitidum	1
1189	JMA07	Silene_leucophylla	17
1190	JMA07	Farsetia_aegyptia	1
1191	JMA07	Seraphidium_herbaalba	5

1192	JMA07	Retama_raetam	1
1193	JMA07	Ephedra_alata	2
1194	SGRS01	Iphiona_scabra	1
1195	SGRS01	Stachys_aegyptiaca	7
1196	SGRS01	Teucrium_polium	6
1197	SGRS01	Phlomis_aurea	3
1198	SGRS01	Anarrhinum_pubescens	2
1199	SGRS01	Globularia_arabica	7
1200	SGRS01	Echinops_spinosus	19
1201	SGRS01	Zilla_spinosa	5
1202	SGRS01	Deverra_tortuosa	2
1203	SGRS01	Seraphidium_herbaalba	8
1204	SGRS01	Plantago_sinaica	11
1205	SGRS01	Galium_setaceum	1
1206	SGRS01	Tanacetum_sinaicum	5
1207	SGRS01	Origanum_syriacum	2
1208	SGRS01	Centaurea_scoparia	1
1209	SGRS01	Heliotropium_arbainense	2
1210	SGRS01	Chiliadenus_montanus	2
1211	SGRS01	Thymus_decussatus	3
1212	SGRS01	Silene_schimperiana	1
1213	SGRS01	Helianthemum_kahiricum	2
1214	SGRS02	Chiliadenus_montanus	18
1215	SGRS02	Globularia_arabica	2
1216	SGRS02	Origanum_syriacum	1
1217	SGRS02	Stachys_aegyptiaca	9
1218	SGRS02	Fagonia_mollis	16
1219	SGRS02	Farsetia_aegyptia	4
1220	SGRS02	Zilla_spinosa	5
1221	SGRS02	Plantago_sinaica	1
1222	SGRS02	Helianthemum_kahiricum	1
1223	SGRS02	Deverra_tortuosa	2
1224	SGRS02	Pistacia_khinjuk	1
1225	SGRS02	Phlomis_aurea	2
1226	SGRS02	Stipa_parviflora	3
1227	SGRS02	Anarrhinum_pubescens	1
1228	SGRS02	Centaurea_scoparia	1
1229	SGRS02	Diplotaxis_harra	1
1230	SGRS02	Echinops_glaberrimus	1
1231	SGRS03	Teucrium_polium	8
1232	SGRS03	Seraphidium_herbaalba	11
1233	SGRS03	Stachys_aegyptiaca	5
1234	SGRS03	Zilla_spinosa	10
1235	SGRS03	Achillea_fragrantissima	6
1236	SGRS03	Origanum_syriacum	2
1237	SGRS03	Alkanna_orientalis	8
1238	SGRS03	Phlomis_aurea	3
1239	SGRS03	Tanacetum_sinaicum	1
1240	SGRS03	Fagonia_mollis	5
1241	SGRS03	Deverra_tortuosa	3

1242	SGRS03	Chiliadenus_montanus	3
1243	SGRS03	Anarrhinum_pubescens	1
1244	SGRS03	Verbascum_decaisneanum	2
1245	SGRS03	Echinops_spinosus	1
1246	SGRS03	Centaurea_scoparia	1
1247	SGRS03	Pterocephalus_sanctus	1
1248	US01	Tanacetum_sinaicum	24
1249	US01	Zilla_spinosa	1
1250	US02	Ballota_undulata	2
1251	US02	Pterocephalus_sanctus	2
1252	US02	Tanacetum_sinaicum	18
1253	US02	Galium_setaceum	1
1254	US02	Centaurea_scoparia	3
1255	US02	Echinops_spinosus	1
1256	US03	Verbascum_decaisneanum	1
1257	US03	Tanacetum_sinaicum	35
1258	US03	Polygala_sinaica	6
1259	US04	Tanacetum_sinaicum	41
1260	US04	Astragalus_echinus	2
1261	US05	Tanacetum_sinaicum	22
1262	US05	Astragalus_echinus	4
1263	US05	Polygala_sinaica	1
1264	US05	Cotoneaster_orbicularis	1
1265	US05	Callipeltis_cucullaris	1
1266	US06	Tanacetum_sinaicum	33
1267	US06	Astragalus_echinus	3
1268	US06	Verbascum_decaisneanum	1
1269	US06	Alkanna_orientalis	1
1270	US06	Pterocephalus_sanctus	1
1271	US07	Cotoneaster_orbicularis	1
1272	US07	Polygala_sinaica	5
1273	US07	Tanacetum_sinaicum	16
1274	US07	Astragalus_echinus	1
1275	US07	Nepeta_septemcrenata	1
1276	US07	Silene_leucophylla	2
1277	US08	Tanacetum_sinaicum	29
1278	US08	Astragalus_echinus	2
1279	US08	Polygala_sinaica	2
1280	US08	Silene_leucophylla	1
1281	US09	Verbascum_sinaiticum	1
1282	US09	Seraphidium_herbaalba	27
1283	US09	Ballota_undulata	2
1284	US09	Echinops_glaberrimus	1
1285	US09	Astragalus_echinus	2
1286	US09	Tanacetum_sinaicum	8
1287	US09	Cotoneaster_orbicularis	1
1288	US09	Phlomis_aurea	3
1289	US09	Silene_schimperiana	1
1290	US10	Seraphidium_herbaalba	38
1291	US10	Centaurea_scoparia	3

1292	US10	Carduus_pycnocephalus	1
1293	US10	Astragalus_echinus	1
1294	US10	Tanacetum_sinaicum	2
1295	US10	Echinops_spinosus	2
1296	US11	Tanacetum_sinaicum	5
1297	US11	Anarrhinum_pubescens	1
1298	US11	Juncus_rigidus	8
1299	US11	Seraphidium_herbaalba	15
1300	US11	Polygala_sinaica	3
1301	US11	Verbascum_sinaiticum	11
1302	US11	Teucrium_polium	1
1303	US11	Mentha_longifolia	6
1304	US11	Astragalus_echinus	1
1305	US11	Cotoneaster_orbicularis	2
1306	US11	Echinops_spinosus	1
1307	US11	Pulicaria_arabica	1
1308	US12	Seraphidium_herbaalba	20
1309	US12	Zilla_spinosa	4
1310	US12	Diplotaxis_harra	2
1311	US12	Echinops_glaberrimus	5
1312	US12	Silene_schimperiana	1
1313	US12	Silene_leucophylla	1
1314	US12	Tanacetum_sinaicum	1
1315	US12	Phlomis_aurea	3
1316	US12	Polygala_sinaica	1
1317	WA01	Seraphidium_herbaalba	78
1318	WA01	Fagonia_mollis	101
1319	WA01	Chiliadenus_montanus	4
1320	WA01	Zilla_spinosa	2
1321	WA01	Matthiola_longipetala	3
1322	WA01	Stachys_aegyptiaca	3
1323	WA01	Teucrium_polium	1
1324	WA01	Achillea_fragrantissima	1
1325	WA01	Alkanna_orientalis	4
1326	WA01	Deverra_tortuosa	1
1327	WA01	Reseda_muricata	1
1328	WA01	Ballota_undulata	1
1329	WA02	Fagonia_mollis	81
1330	WA02	Fagonia_arabica	38
1331	WA02	Zilla_spinosa	2
1332	WA02	Seraphidium_herbaalba	21
1333	WA02	Stachys_aegyptiaca	9
1334	WA02	Gymnocarpus_decandrum	1
1335	WA02	Caylusea_hexagyna	1
1336	WA02	Matthiola_longipetala	1
1337	WA02	Callipeltis_cucullaris	1
1338	WA02	Anarrhinum_pubescens	1
1339	WA02	Alkanna_orientalis	1
1340	WA03	Deverra_tortuosa	1
1341	WA03	Teucrium_polium	8

1342	WA03	Ballota_saxatilis	2
1343	WA03	Origanum_syriacum	6
1344	WA03	Achillea_fragrantissima	25
1345	WA03	Stachys_aegyptiaca	1
1346	WA03	Matthiola_longipetala	2
1347	WA03	Echinops_glaberrimus	2
1348	WA03	Zilla_spinosa	3
1349	WA03	Chiliadenus_montanus	3
1350	WA03	Deverra_triradiata	2
1351	WA03	Seraphidium_herbaalba	11
1352	WA03	Tanacetum_sinaicum	4
1353	WA03	Phlomis_aurea	3
1354	WA03	Stachys_aegyptiaca	1
1355	WA03	Deverra_tortuosa	2
1356	WA03	Ballota_undulata	1
1357	WA03	Centaurea_eryngioides	2
1358	WA03	Galium_setaceum	1
1359	WA04	Verbascum_sinaiticum	10
1360	WA04	Achillea_fragrantissima	60
1361	WA04	Alkanna_orientalis	20
1362	WA04	Mentha_longifolia	8
1363	WA04	Pulicaria_undulata	7
1364	WA04	Teucrium_polium	10
1365	WA04	Tanacetum_sinaicum	1
1366	WA04	Fagonia_mollis	9
1367	WA04	Stachys_aegyptiaca	2
1368	WA04	Matthiola_longipetala	4
1369	WA04	Carduus_pycnocephalus	4
1370	WA04	Zilla_spinosa	5
1371	WA04	Ficus_palmata	1
1372	WA04	Phlomis_aurea	1
1373	WA04	Callipeltis_cucullaris	1
1374	WA04	Caylusea_hexagyna	2
1375	WA04	Galium_setaceum	1
1376	WA05	Zilla_spinosa	12
1377	WA05	Caylusea_hexagyna	4
1378	WA05	Fagonia_mollis	29
1379	WA05	Gomphocarpus_sinaicus	3
1380	WA05	Teucrium_polium	20
1381	WA05	Achillea_fragrantissima	12
1382	WA05	Matthiola_longipetala	8
1383	WA05	Alkanna_orientalis	6
1384	WA05	Seraphidium_herbaalba	11
1385	WA05	Stachys_aegyptiaca	9
1386	WA05	Chiliadenus_montanus	3
1387	WA05	Phlomis_aurea	1
1388	WA05	Echinops_glaberrimus	3
1389	WA05	Echinops_spinosus	1
1390	WA05	Deverra_tortuosa	1
1391	WA05	Callipeltis_cucullaris	1

1392	WA05	Galium_setaceum	1
1393	WA06	Matthiola_longipetala	16
1394	WA06	Seraphidium_herbaalba	42
1395	WA06	Teucrium_polium	23
1396	WA06	Alkanna_orientalis	1
1397	WA06	Anarrhinum_pubescens	10
1398	WA06	Caylusea_hexagyna	1
1399	WA06	Ballota_undulata	5
1400	WA06	Chiliadenus_montanus	8
1401	WA06	Deverra_tortuosa	2
1402	WA06	Echinops_glaberrimus	9
1403	WA06	Tanacetum_sinaicum	4
1404	WA06	Globularia_arabica	1
1405	WA06	Stachys_aegyptiaca	2
1406	WA06	Origanum_syriacum	2
1407	WA06	Ballota_saxatilis	1
1408	WAH01	Polygala_sinaica	1
1409	WAH01	Echinops_glaberrimus	12
1410	WAH01	Origanum_syriacum	6
1411	WAH01	Seraphidium_herbaalba	38
1412	WAH01	Achillea_fragrantissima	12
1413	WAH01	Pterocephalus_sanctus	1
1414	WAH01	Ballota_undulata	4
1415	WAH01	Tanacetum_sinaicum	7
1416	WAH01	Teucrium_polium	9
1417	WAH01	Diplotaxis_harra	1
1418	WAH01	Galium_setaceum	3
1419	WAH01	Phlomis_aurea	3
1420	WAH01	Alkanna_orientalis	1
1421	WAH01	Cotoneaster_orbicularis	1
1422	WAH01	Verbascum_decaisneanum	1
1423	WAH02	Verbascum_sinaiticum	120
1424	WAH02	Crataegus_x_sinaica	4
1425	WAH02	Mentha_longifolia	58
1426	WAH02	Pterocephalus_sanctus	4
1427	WAH02	Origanum_syriacum	53
1428	WAH02	Teucrium_polium	4
1429	WAH02	Ficus_palmata	10
1430	WAH02	Galium_setaceum	2
1431	WAH02	Echinops_spinosus	1
1432	WAH02	Plantago_sinaica	1
1433	WAH02	Ballota_saxatilis	7
1434	WAH02	Chiliadenus_montanus	1
1435	WAH02	Stipa_parviflora	1
1436	WAH02	Diplotaxis_acris	1
1437	WAH02	Pterocephalus_sanctus	1
1438	WAH02	Callipeltis_cucullaris	11
1439	WAH02	Tanacetum_sinaicum	7
1440	WAH02	Ballota_undulata	1
1441	WAH02	Cotoneaster_orbicularis	1

1442	WAH02	Echinops_glaberrimus	1
1443	WAH02	Seraphidium_herbaalba	1
1444	WAH03	Tanacetum_sinaicum	7
1445	WAH03	Echinops_glaberrimus	24
1446	WAH03	Seraphidium_herbaalba	88
1447	WAH03	Callipeltis_cucullaris	1
1448	WAH03	Teucrium_polium	8
1449	WAH03	Anarrhinum_pubescens	1
1450	WAH03	Diplotaxis_harra	6
1451	WAH03	Deverra_triradiata	1
1452	WAH03	Galium_setaceum	2
1453	WAH03	Ballota_kaiseri	2
1454	WAH03	Echinops_spinosus	1
1455	WAH03	Cotoneaster_orbicularis	1
1456	WAH03	Rhamnus_dispermus	1
1457	WAH04	Cotoneaster_orbicularis	4
1458	WAH04	Origanum_syriacum	19
1459	WAH04	Tanacetum_sinaicum	8
1460	WAH04	Echinops_glaberrimus	4
1461	WAH04	Galium_setaceum	2
1462	WAH04	Callipeltis_cucullaris	1
1463	WAH04	Crataegus_x_sinaica	2
1464	WAH04	Seraphidium_herbaalba	7
1465	WAH04	Teucrium_polium	1
1466	WAH04	Chiliadenus_montanus	1
1467	WAH04	Phlomis_aurea	1
1468	WAH04	Ballota_saxatilis	1
1469	WAH05	Cotoneaster_orbicularis	5
1470	WAH05	Origanum_syriacum	6
1471	WAH05	Phlomis_aurea	2
1472	WAH05	Ballota_kaiseri	1
1473	WAH05	Ballota_saxatilis	2
1474	WAH05	Seraphidium_herbaalba	1
1475	WAH05	Crataegus_x_sinaica	1
1476	WAH05	Plantago_sinaica	1
1477	WAH05	Tanacetum_sinaicum	2
1478	WAH05	Echinops_glaberrimus	4
1479	WAH05	Pterocephalus_sanctus	1
1480	WAH06	Plantago_sinaica	10
1481	WAH06	Teucrium_polium	1
1482	WAH06	Stipa_parviflora	1
1483	WAH06	Tanacetum_sinaicum	20
1484	WAH06	Phlomis_aurea	6
1485	WAH06	Echinops_glaberrimus	6
1486	WAH06	Chiliadenus_montanus	1
1487	WAH06	Echinops_spinosus	3
1488	WAH06	Crataegus_x_sinaica	1
1489	WAH06	Thymus_decussatus	1
1490	WAH06	Ballota_kaiseri	3
1491	WAH06	Ballota_undulata	1

1492	WAH06	Seraphidium_herbaalba	1
1493	WAH07	Seraphidium_herbaalba	5
1494	WAH07	Teucrium_polium	16
1495	WAH07	Alkanna_orientalis	3
1496	WAH07	Tanacetum_sinaicum	55
1497	WAH07	Phlomis_aurea	2
1498	WAH07	Plantago_sinaica	1
1499	WAH07	Anarrhinum_pubescens	1
1500	WAH07	Ballota_undulata	1
1501	WAH07	Echinops_glaberrimus	1
1502	WAH07	Cotoneaster_orbicularis	1
1503	WAH07	Polygala_sinaica	1
1504	WAH07	Callipeltis_cucullaris	1
1505	WAH07	Galium_setaceum	3
1506	WAJ01	Ballota_undulata	2
1507	WAJ01	Fagonia_mollis	43
1508	WAJ01	Fagonia_arabica	10
1509	WAJ01	Caylusea_hexagyna	13
1510	WAJ01	Chiliadenus_montanus	1
1511	WAJ01	Matthiola_longipetala	14
1512	WAJ01	Gomphocarpus_sinaicus	1
1513	WAJ01	Achillea_fragrantissima	9
1514	WAJ01	Echinops_glaberrimus	8
1515	WAJ01	Echinops_spinosus	6
1516	WAJ01	Teucrium_polium	7
1517	WAJ01	Deverra_tortuosa	1
1518	WAJ01	Stachys_aegyptiaca	2
1519	WAJ01	Alkanna_orientalis	1
1520	WAJ01	Galium_setaceum	7
1521	WAJ01	Anarrhinum_pubescens	1
1522	WAJ01	Lotononis_dichotoma	2
1523	WAJ01	Globularia_arabica	1
1524	WAJ01	Iphiona_scabra	2
1525	WAJ01	Launaea_spinosa	7
1526	WAJ01	Anarrhinum_pubescens	1
1527	WAJ01	Heliotropium_digynum	1
1528	WAJ01	Helianthemum_ellipticum	1
1529	WAJ01	Deverra_tortuosa	1
1530	WAJ02	Chiliadenus_montanus	49
1531	WAJ02	Tanacetum_sinaicum	16
1532	WAJ02	Anarrhinum_pubescens	4
1533	WAJ02	Echinops_glaberrimus	2
1534	WAJ02	Alkanna_orientalis	2
1535	WAJ02	Stachys_aegyptiaca	9
1536	WAJ02	Ballota_undulata	10
1537	WAJ02	Teucrium_polium	4
1538	WAJ02	Deverra_tortuosa	4
1539	WAJ02	Plantago_sinaica	5
1540	WAJ02	Seraphidium_herbaalba	19
1541	WAJ02	Fagonia_mollis	1

1542	WAJ02	Galium_setaceum	1
1543	WAJ02	Diplotaxis_harra	1
1544	WAR01	Astragalus_caprinus	1
1545	WAR01	Fagonia_mollis	69
1546	WAR01	Matthiola_longipetala	18
1547	WAR01	Alkanna_orientalis	12
1548	WAR01	Achillea_fragrantissima	5
1549	WAR01	Caylusea_hexagyna	13
1550	WAR01	Zilla_spinosa	5
1551	WAR01	Echinops_spinosus	11
1552	WAR01	Artemisia_judaica	1
1553	WAR01	Phlomis_aurea	1
1554	WAR01	Teucrium_polium	1
1555	WAR01	Seraphidium_herbaalba	1
1556	WAR01	Fagonia_arabica	1
1557	WAR01	Chiliadenus_montanus	1
1558	WAR02	Zilla_spinosa	1
1559	WAR02	Ballota_undulata	1
1560	WAR02	Seraphidium_herbaalba	6
1561	WAR02	Echinops_glaberrimus	2
1562	WAR02	Phlomis_aurea	2
1563	WAR02	Alkanna_orientalis	2
1564	WAR02	Callipeltis_cucullaris	3
1565	WAR02	Galium_setaceum	7
1566	WAR02	Echinops_spinosus	2
1567	WAR02	Teucrium_polium	2
1568	WAR02	Matthiola_longipetala	3
1569	WAR02	Reseda_pruinosa	1
1570	WAR02	Anarrhinum_pubescens	1
1571	WAR02	Caylusea_hexagyna	2
1572	WAR02	Chiliadenus_montanus	6
1573	WAR02	Tanacetum_sinaicum	1
1574	WAR02	Origanum_syriacum	3
1575	WAR02	Fagonia_mollis	1
1576	WAR02	Stachys_aegyptiaca	3
1577	WAR02	Centaurea_eryngioides	1
1578	WAR03	Hyoscyamus_muticus	1
1579	WAR03	Seraphidium_herbaalba	20
1580	WAR03	Matthiola_longipetala	6
1581	WAR03	Echinops_spinosus	5
1582	WAR03	Fagonia_mollis	22
1583	WAR03	Zilla_spinosa	8
1584	WAR03	Origanum_syriacum	2
1585	WAR03	Alkanna_orientalis	4
1586	WAR03	Echinops_glaberrimus	9
1587	WAR03	Diplotaxis_harra	1
1588	WAR03	Fagonia_arabica	17
1589	WAR03	Tanacetum_sinaicum	1
1590	WAR03	Achillea_fragrantissima	1
1591	WAR03	Farsetia_aegyptia	1

1592	WAR03	Stachys_aegyptiaca	5
1593	WAR04	Diplotaxis_harra	20
1594	WAR04	Echinops_spinosus	8
1595	WAR04	Tanacetum_sinaicum	5
1596	WAR04	Zilla_spinosa	2
1597	WAR04	Seraphidium_herbaalba	14
1598	WAR04	Scariola_orientalis	3
1599	WAR04	Teucrium_polium	4
1600	WAR04	Matthiola_longipetala	4
1601	WAR04	Echinops_glaberrimus	3
1602	WAR04	Phlomis_aurea	1
1603	WAR04	Ballota_undulata	1
1604	WAR05	Chiliadenus_montanus	8
1605	WAR05	Seraphidium_herbaalba	21
1606	WAR05	Diplotaxis_harra	29
1607	WAR05	Teucrium_polium	5
1608	WAR05	Ballota_undulata	3
1609	WAR05	Silene_linearis	2
1610	WAR05	Verbascum_decaisneanum	3
1611	WAR05	Pterocephalus_sanctus	1
1612	WAR05	Galium_setaceum	2
1613	WAR05	Echinops_spinosus	3
1614	WAR05	Anarrhinum_pubescens	1
1615	WAR06	Seraphidium_herbaalba	61
1616	WAR06	Diplotaxis_harra	84
1617	WAR06	Silene_schimperiana	1
1618	WAR06	Ballota_undulata	2
1619	WAR06	Echinops_spinosus	4
1620	WAR06	Echinops_glaberrimus	1
1621	WAR06	Teucrium_polium	2
1622	WAR06	Verbascum_decaisneanum	4
1623	WAR06	Iphiona_mucronata	1
1624	WAR06	Matthiola_longipetala	1
1625	WAR06	Fagonia_arabica	1
1626	WAR06	Tanacetum_sinaicum	4
1627	WAR06	Anarrhinum_pubescens	2
1628	WAR06	Fagonia_mollis	1
1629	WAR07	Iphiona_mucronata	1
1630	WAR07	Diplotaxis_harra	13
1631	WAR07	Matthiola_longipetala	5
1632	WAR07	Seraphidium_herbaalba	14
1633	WAR07	Fagonia_arabica	31
1634	WAR07	Teucrium_polium	1
1635	WAR07	Galium_setaceum	1
1636	WAR07	Zilla_spinosa	2
1637	WAR07	Ephedra_alata	5
1638	WAR07	Gymnocarpus_decandrum	1
1639	WAR08	Centaurea_scoparia	7
1640	WAR08	Echinops_spinosus	7
1641	WAR08	Tanacetum_sinaicum	14

1642	WAR08	Seraphidium_herbaalba	19
1643	WAR08	Phlomis_aurea	8
1644	WAR08	Anarrhinum_pubescens	1
1645	WAR08	Teucrium_polium	5
1646	WAR08	Zilla_spinosa	3
1647	WAR08	Deverra_tortuosa	4
1648	WAR08	Chiliadenus_montanus	3
1649	WAR08	Gymnocarpus_decandrum	2
1650	WAR08	Diplotaxis_harra	12
1651	WAR08	Plantago_sinaica	2
1652	WAR08	Galium_setaceum	3
1653	WAR08	Origanum_syriacum	2
1654	WAR09	Pterocephalus_sanctus	14
1655	WAR09	Phlomis_aurea	4
1656	WAR09	Teucrium_polium	6
1657	WAR09	Tanacetum_sinaicum	16
1658	WAR09	Verbascum_decaisneanum	6
1659	WAR09	Diplotaxis_harra	1
1660	WAR09	Callipeltis_cucullaris	4
1661	WAR09	Plantago_sinaica	12
1662	WAR09	Chiliadenus_montanus	6
1663	WAR09	Echinops_spinosus	6
1664	WAR09	Seraphidium_herbaalba	2
1665	WAR09	Nepeta_septemcrenata	2
1666	WAR09	Galium_setaceum	2
1667	WAR09	Ephedra_alata	1
1668	WAR09	Mentha_longifolia	5
1669	WAR09	Echinops_glaberrimus	1
1670	WAR09	Adiantum_capillus-veneris	1
1671	WAR10	Tanacetum_sinaicum	2
1672	WAR10	Mentha_longifolia	6
1673	WAR10	Verbascum_sinaiticum	1
1674	WAR10	Teucrium_polium	2
1675	WAR10	Origanum_syriacum	5
1676	WAR10	Verbascum_decaisneanum	3
1677	WAR10	Pterocephalus_sanctus	3
1678	WAR10	Diplotaxis_harra	19
1679	WAR10	Crataegus_x_sinaica	1
1680	WAR10	Seraphidium_herbaalba	3
1681	WAR10	Echinops_spinosus	2
1682	WAR10	Matthiola_longipetala	6
1683	WAR10	Zilla_spinosa	1
1684	WAR10	Caylusea_hexagyna	1
1685	WAR11	Teucrium_polium	4
1686	WAR11	Tanacetum_sinaicum	19
1687	WAR11	Deverra_tortuosa	7
1688	WAR11	Seraphidium_herbaalba	4
1689	WAR11	Echinops_glaberrimus	5
1690	WAR11	Diplotaxis_harra	11
1691	WAR11	Phlomis_aurea	7

1692	WAR11	Chiliadenus_montanus	2
1693	WAR11	Centaurea_scoparia	1
1694	WAR11	Farsetia_aegyptia	2
1695	WAR12	Matthiola_longipetala	14
1696	WAR12	Seraphidium_herbaalba	63
1697	WAR12	Diplotaxis_harra	17
1698	WAR12	Tanacetum_sinaicum	7
1699	WAR12	Echinops_spinosus	2
1700	WAR12	Thymus_decussatus	5
1701	WAR12	Silene_linearis	1
1702	WAR12	Chiliadenus_montanus	1
1703	WAR13	Tanacetum_sinaicum	36
1704	WAR13	Galium_setaceum	1
1705	WAR13	Centaurea_scoparia	3
1706	WAR13	Verbascum_decaisneanum	1
1707	WAR13	Nepeta_septemcrenata	2
1708	WAR13	Phlomis_aurea	14
1709	WAR13	Echinops_spinosus	7
1710	WAR13	Silene_schimperiana	2
1711	WAR13	Teucrium_polium	11
1712	WAR13	Seraphidium_herbaalba	24
1713	WAR13	Plantago_sinaica	1
1714	WAR13	Diplotaxis_harra	4
1715	WAR13	Matthiola_longipetala	12
1716	WAR13	Chiliadenus_montanus	2
1717	WAR13	Echinops_glaberrimus	5
1718	WAR13	Origanum_syriacum	2
1719	WAR14	Deverra_tortuosa	2
1720	WAR14	Callipeltis_cucullaris	2
1721	WAR14	Teucrium_polium	2
1722	WAR14	Pterocephalus_sanctus	1
1723	WAR14	Echinops_spinosus	2
1724	WAR14	Plantago_sinaica	2
1725	WAR14	Tanacetum_sinaicum	12
1726	WAR14	Seraphidium_herbaalba	5
1727	WAR14	Silene_linearis	3
1728	WAR14	Gymnocarpus_decandrum	1
1729	WAR14	Nepeta_septemcrenata	2
1730	WAR14	Polygala_sinaica	1
1731	WAR14	Globularia_arabica	1
1732	WAR14	Origanum_syriacum	10
1733	WAR14	Phlomis_aurea	2
1734	WAR14	Chiliadenus_montanus	1
1735	WAT01	Achillea_fragrantissima	7
1736	WAT01	Stachys_aegyptiaca	2
1737	WAT01	Plantago_sinaica	6
1738	WAT01	Centaurea_eryngioides	5
1739	WAT01	Phlomis_aurea	6
1740	WAT01	Echinops_spinosus	7
1741	WAT01	Foeniculum_vulgare	5

1742	WAT01	Heliotropium_arbainense	3
1743	WAT01	Globularia_arabica	2
1744	WAT01	Tanacetum_sinaicum	3
1745	WAT01	Salvia_multicaulis	6
1746	WAT01	Chiliadenus_montanus	5
1747	WAT01	Teucrium_polium	7
1748	WAT01	Colutea_istria	1
1749	WAT01	Anarrhinum_pubescens	1
1750	WAT01	Crataegus_x_sinaica	1
1751	WAT01	Origanum_syriacum	1
1752	WAT01	Silene_schimperiana	2
1753	WAT01	Diplotaxis_harra	2
1754	WAT01	Pterocephalus_sanctus	1
1755	WAT02	Stachys_aegyptiaca	9
1756	WAT02	Achillea_fragrantissima	19
1757	WAT02	Salvia_multicaulis	3
1758	WAT02	Globularia_arabica	9
1759	WAT02	Diplotaxis_harra	16
1760	WAT02	Teucrium_polium	4
1761	WAT02	Seraphidium_herbaalba	1
1762	WAT02	Scariola_orientalis	3
1763	WAT02	Plantago_sinaica	7
1764	WAT02	Tanacetum_sinaicum	3
1765	WAT02	Crataegus_x_sinaica	1
1766	WAT02	Phlomis_aurea	3
1767	WAT02	Verbascum_sinaiticum	1
1768	WAT02	Pulicaria_arabica	4
1769	WAT02	Foeniculum_vulgare	1
1770	WAT02	Stipa_parviflora	1
1771	WAT03	Teucrium_polium	5
1772	WAT03	Galium_setaceum	9
1773	WAT03	Diplotaxis_harra	6
1774	WAT03	Stachys_aegyptiaca	5
1775	WAT03	Globularia_arabica	16
1776	WAT03	Chiliadenus_montanus	13
1777	WAT03	Plantago_sinaica	9
1778	WAT03	Iphiona_mucronata	1
1779	WAT03	Ficus_palmata	1
1780	WAT03	Zilla_spinosa	1
1781	WAT03	Pulicaria_undulata	1
1782	WAT03	Phlomis_aurea	3
1783	WAT03	Pulicaria_arabica	8
1784	WAT03	Salvia_multicaulis	2
1785	WAT04	Alkanna_orientalis	4
1786	WAT04	Verbascum_sinaiticum	36
1787	WAT04	Achillea_fragrantissima	4
1788	WAT04	Pulicaria_arabica	3
1789	WAT04	Pulicaria_undulata	4
1790	WAT04	Seraphidium_herbaalba	4
1791	WAT04	Rosa_arabica	3

1792	WAT04	Deverra_triradiata	1
1793	WAT04	Foeniculum_vulgare	1
1794	WAT04	Crataegus_x_sinaica	5
1795	WAT04	Phlomis_aurea	1
1796	WAT04	Zilla_spinosa	1
1797	WAT05	Chiliadenus_montanus	28
1798	WAT05	Plantago_sinaica	8
1799	WAT05	Diplotaxis_harra	21
1800	WAT05	Stachys_aegyptiaca	13
1801	WAT05	Achillea_fragrantissima	1
1802	WAT05	Scariola_orientalis	19
1803	WAT05	Galium_setaceum	2
1804	WAT05	Iphiona_mucronata	1
1805	WAT05	Alkanna_orientalis	18
1806	WAT05	Tanacetum_sinaicum	3
1807	WAT05	Centaurea_eryngioides	4
1808	WAT05	Phagnalon_nitidum	3
1809	WAT06	Polygala_sinaica	1
1810	WAT06	Scariola_orientalis	3
1811	WAT06	Anarrhinum_pubescens	2
1812	WAT06	Echinops_spinosus	7
1813	WAT06	Tanacetum_sinaicum	5
1814	WAT06	Alkanna_orientalis	5
1815	WAT06	Echinops_glaberrimus	4
1816	WAT06	Nepeta_septemcrenata	3
1817	WAT06	Ballota_undulata	3
1818	WAT07	Polygala_sinaica	4
1819	WAT07	Phlomis_aurea	3
1820	WAT07	Diplotaxis_harra	33
1821	WAT07	Echinops_spinosus	7
1822	WAT07	Peganum_harmala	1
1823	WAT07	Zilla_spinosa	5
1824	WAT07	Deverra_triradiata	1
1825	WAT07	Deverra_tortuosa	1
1826	WAT07	Scariola_orientalis	3
1827	WAT07	Alkanna_orientalis	3
1828	WAT07	Seraphidium_herbaalba	3
1829	WAT07	Tanacetum_sinaicum	6
1830	WAT07	Verbascum_sinaiticum	1
1831	WAT07	Anarrhinum_pubescens	1
1832	WAT07	Silene_schimperiana	1
1833	WAT07	Teucrium_polium	1
1834	WAT08	Galium_setaceum	10
1835	WAT08	Diplotaxis_harra	14
1836	WAT08	Mentha_longifolia	10
1837	WAT08	Seraphidium_herbaalba	2
1838	WAT08	Anarrhinum_pubescens	5
1839	WAT08	Chiliadenus_montanus	16
1840	WAT08	Echinops_spinosus	3
1841	WAT08	Centaurea_eryngioides	5

1842	WAT08	Alkanna_orientalis	1
1843	WAT08	Zilla_spinosa	2
1844	WAT08	Phlomis_aurea	3
1845	WAT08	Tanacetum_sinaicum	1
1846	WAT08	Plantago_sinaica	1
1847	WAT08	Nepeta_septemcrenata	1
1848	WAT09	Zilla_spinosa	20
1849	WAT09	Deverra_tortuosa	2
1850	WAT09	Alkanna_orientalis	3
1851	WAT09	Chiliadenus_montanus	1
1852	WAT09	Seraphidium_herbaalba	2
1853	WAT09	Lappula_sinaica	1
1854	WAT09	Diplotaxis_harra	5
1855	WAT09	Rhamnus_dispermus	3
1856	WAT09	Polygala_sinaica	1
1857	WAT09	Galium_setaceum	2
1858	WAT10	Phlomis_aurea	6
1859	WAT10	Plantago_sinaica	4
1860	WAT10	Teucrium_polium	2
1861	WAT10	Diplotaxis_harra	8
1862	WAT10	Pterocephalus_sanctus	4
1863	WAT10	Zilla_spinosa	12
1864	WAT10	Deverra_triradiata	3
1865	WAT10	Echinops_spinosus	1
1866	WAT10	Deverra_tortuosa	1
1867	WAT10	Alkanna_orientalis	1
1868	WAT10	Galium_setaceum	1
1869	WAT11	Centaurea_scoparia	1
1870	WAT11	Astragalus_spinosus	2
1871	WAT11	Zilla_spinosa	6
1872	WAT11	Diplotaxis_harra	4
1873	WAT11	Seraphidium_herbaalba	2
1874	WAT11	Stachys_aegyptiaca	6
1875	WAT11	Gymnocarpus_decandrum	2
1876	WAT11	Teucrium_polium	12
1877	WAT11	Deverra_triradiata	1
1878	WAT11	Plantago_sinaica	1
1879	WAT12	Chiliadenus_montanus	11
1880	WAT12	Diplotaxis_harra	4
1881	WAT12	Matthiola_longipetala	8
1882	WAT12	Seraphidium_herbaalba	5
1883	WAT12	Achillea_fragrantissima	6
1884	WAT12	Zilla_spinosa	4
1885	WAT12	Stachys_aegyptiaca	2
1886	WAT12	Scariola_orientalis	4
1887	WAT12	Plantago_sinaica	1
1888	WAT12	Galium_setaceum	1
1889	WAT12	Deverra_tortuosa	1
1890	WAT12	Gymnocarpus_decandrum	4
1891	WAT12	Teucrium_polium	4

1892	WB01	Alkanna_orientalis	14
1893	WB01	Caylusea_hexagyna	5
1894	WB01	Stachys_aegyptiaca	1
1895	WB01	Seraphidium_herbaalba	9
1896	WB01	Matthiola_longipetala	27
1897	WB01	Fagonia_mollis	45
1898	WB01	Gymnocarpus_decandrum	45
1899	WB01	Capparis_spinosa	1
1900	WB01	Achillea_fragrantissima	3
1901	WB01	Zilla_spinosa	4
1902	WB01	Chiliadenus_montanus	1
1903	WB02	Origanum_syriacum	4
1904	WB02	Achillea_fragrantissima	10
1905	WB02	Fagonia_mollis	9
1906	WB02	Matthiola_longipetala	6
1907	WB02	Echinops_glaberrimus	3
1908	WB02	Zilla_spinosa	2
1909	WB02	Seraphidium_herbaalba	3
1910	WB02	Chiliadenus_montanus	6
1911	WB02	Caylusea_hexagyna	2
1912	WB02	Teucrium_polium	3
1913	WB03	Tanacetum_sinaicum	5
1914	WB03	Seraphidium_herbaalba	21
1915	WB03	Matthiola_longipetala	11
1916	WB03	Fagonia_mollis	3
1917	WB03	Diplotaxis_harra	9
1918	WB03	Alkanna_orientalis	10
1919	WB03	Stachys_aegyptiaca	9
1920	WB03	Origanum_syriacum	11
1921	WB03	Caylusea_hexagyna	1
1922	WB03	Gymnocarpus_decandrum	2
1923	WB03	Zilla_spinosa	5
1924	WB03	Fagonia_arabica	3
1925	WB03	Ballota_undulata	3
1926	WB03	Achillea_fragrantissima	2
1927	WB03	Launaea_spinosa	1
1928	WB03	Echinops_glaberrimus	2
1929	WB03	Colutea_istria	1
1930	WB03	Centaurea_scoparia	3
1931	WB03	Deverra_tortuosa	1
1932	WB03	Phlomis_aurea	1
1933	WB03	Stipa_parviflora	1
1934	WB03	Echinops_spinosus	1
1935	WB04	Launaea_spinosa	3
1936	WB04	Echinops_glaberrimus	3
1937	WB04	Chiliadenus_montanus	4
1938	WB04	Diplotaxis_harra	6
1939	WB04	Centaurea_scoparia	6
1940	WB04	Seraphidium_herbaalba	1
1941	WB04	Matthiola_longipetala	3

1942	WB04	Gymnocarpus_decandrum	3
1943	WB04	Stachys_aegyptiaca	3
1944	WB04	Reseda_muricata	2
1945	WB04	Fagonia_arabica	5
1946	WB04	Silene_linearis	1
1947	WB04	Teucrium_polium	1
1948	WB04	Verbascum_decaisneanum	4
1949	WB05	Deverra_tortuosa	2
1950	WB05	Teucrium_polium	2
1951	WB05	Phlomis_aurea	3
1952	WB05	Diplotaxis_harra	6
1953	WB05	Seraphidium_herbaalba	20
1954	WB05	Farsetia_aegyptia	2
1955	WB05	Alkanna_orientalis	1
1956	WB05	Zilla_spinosa	1
1957	WB05	Echinops_glaberrimus	5
1958	WB05	Zilla_spinosa	3
1959	WB05	Stachys_aegyptiaca	2
1960	WB05	Tanacetum_sinaicum	1
1961	WB05	Ballota_undulata	1
1962	WB05	Anarrhinum_pubescens	1
1963	WB05	Chiliadenus_montanus	3
1964	WB05	Ficus_palmata	1
1965	WB05	Capparis_spinosa	1
1966	WB05	Polygala_sinaica	2
1967	WB05	Colutea_istria	1
1968	WB05	Iphiona_scabra	1
1969	WB06	Tanacetum_sinaicum	5
1970	WB06	Zilla_spinosa	1
1971	WB06	Seraphidium_herbaalba	6
1972	WB06	Phlomis_aurea	1
1973	WB06	Echinops_glaberrimus	5
1974	WB06	Stachys_aegyptiaca	1
1975	WB06	Chiliadenus_montanus	6
1976	WB06	Iphiona_scabra	1
1977	WB06	Callipeltis_cucullaris	1
1978	WB06	Polygala_sinaica	1
1979	WB06	Matthiola_longipetala	2
1980	WB06	Ballota_undulata	6
1981	WB06	Colutea_istria	1
1982	WB06	Diplotaxis_harra	14
1983	WB06	Centaurea_eryngioides	7
1984	WB06	Deverra_tortuosa	6
1985	WB06	Silene_schimperiana	1
1986	WB06	Origanum_syriacum	5
1987	WB06	Verbascum_decaisneanum	1
1988	WB06	Stipa_parviflora	2
1989	WB06	Phagnalon_barbeyanum	1
1990	WB06	Adiantum_capillus-veneris	1
1991	WB06	Galium_setaceum	2

1992	WF01	Seraphidium_herbaalba	63
1993	WF01	Echinops_glaberrimus	79
1994	WF01	Teucrium_polium	8
1995	WF01	Tanacetum_sinaicum	3
1996	WF01	Stachys_aegyptiaca	13
1997	WF01	Zilla_spinosa	17
1998	WF01	Alkanna_orientalis	8
1999	WF01	Phlomis_aurea	4
2000	WF01	Pterocephalus_sanctus	1
2001	WF01	Callipeltis_cucullaris	2
2002	WF01	Anarrhinum_pubescens	1
2003	WF01	Matthiola_longipetala	8
2004	WF01	Deverra_tortuosa	1
2005	WF01	Ballota_undulata	2
2006	WF01	Plantago_sinaica	1
2007	WF02	Seraphidium_herbaalba	103
2008	WF02	Zilla_spinosa	45
2009	WF02	Fagonia_mollis	35
2010	WF02	Fagonia_arabica	47
2011	WF02	Phlomis_aurea	4
2012	WF02	Alkanna_orientalis	31
2013	WF02	Stachys_aegyptiaca	4
2014	WF02	Teucrium_polium	4
2015	WF02	Achillea_fragrantissima	2
2016	WF02	Deverra_tortuosa	2
2017	WF02	Echinops_glaberrimus	6
2018	WF02	Centaurea_scoparia	3
2019	WF02	Chiliadenus_montanus	1
2020	WF02	Matthiola_longipetala	2
2021	WF02	Phagnalon_nitidum	1
2022	WF02	Galium_setaceum	1
2023	WF03	Fagonia_arabica	112
2024	WF03	Seraphidium_herbaalba	17
2025	WF03	Zilla_spinosa	23
2026	WF03	Stachys_aegyptiaca	4
2027	WF03	Polygala_sinaica	2
2028	WF03	Pulicaria_undulata	1
2029	WF04	Seraphidium_herbaalba	49
2030	WF04	Stachys_aegyptiaca	65
2031	WF04	Echinops_glaberrimus	39
2032	WF04	Tanacetum_sinaicum	25
2033	WF04	Phlomis_aurea	24
2034	WF04	Gomphocarpus_sinaicus	1
2035	WF04	Alkanna_orientalis	25
2036	WF04	Teucrium_polium	12
2037	WF04	Zilla_spinosa	7
2038	WF04	Caylusea_hexagyna	1
2039	WF04	Matthiola_longipetala	4
2040	WF04	Fagonia_mollis	1
2041	WF04	Callipeltis_cucullaris	2

2042	WF04	Origanum_syriacum	1
2043	WF04	Deverra_tortuosa	2
2044	WF04	Chiliadenus_montanus	1
2045	WF04	Plantago_sinaica	1
2046	WF04	Centaurea_scoparia	1
2047	WF05	Chiliadenus_montanus	14
2048	WF05	Echinops_glaberrimus	23
2049	WF05	Teucrium_polium	10
2050	WF05	Tanacetum_sinaicum	25
2051	WF05	Ballota_undulata	11
2052	WF05	Seraphidium_herbaalba	48
2053	WF05	Deverra_tortuosa	2
2054	WF05	Phlomis_aurea	21
2055	WF05	Matthiola_longipetala	27
2056	WF05	Zilla_spinosa	3
2057	WF05	Pterocephalus_sanctus	1
2058	WF05	Verbascum_decaisneanum	3
2059	WF05	Alkanna_orientalis	1
2060	WF05	Echinops_spinosus	1
2061	WF05	Diplotaxis_harra	2
2062	WF05	Galium_setaceum	6
2063	WF05	Astragalus_echinus	3
2064	WF06	Polygala_sinaica	23
2065	WF06	Zilla_spinosa	30
2066	WF06	Centaurea_scoparia	11
2067	WF06	Stachys_aegyptiaca	41
2068	WF06	Callipeltis_cucullaris	4
2069	WF06	Fagonia_arabica	42
2070	WF06	Deverra_tortuosa	7
2071	WF06	Seraphidium_herbaalba	13
2072	WF06	Anarrhinum_pubescens	2
2073	WF06	Echinops_glaberrimus	9
2074	WF06	Galium_setaceum	2
2075	WF06	Tanacetum_sinaicum	2
2076	WF06	Phlomis_aurea	4
2077	WF06	Teucrium_polium	5
2078	WF06	Chiliadenus_montanus	8
2079	WF06	Matthiola_longipetala	1
2080	WF07	Zilla_spinosa	39
2081	WF07	Fagonia_arabica	83
2082	WF07	Polygala_sinaica	7
2083	WF07	Fagonia_mollis	3
2084	WF07	Seraphidium_herbaalba	5
2085	WF07	Echinops_glaberrimus	1
2086	WF07	Stachys_aegyptiaca	1
2087	WF07	Tanacetum_sinaicum	1
2088	WF07	Deverra_tortuosa	3
2089	WF07	Matthiola_longipetala	3
2090	WF07	Chiliadenus_montanus	1
2091	WF08	Stachys_aegyptiaca	29

2092	WF08	Seraphidium_herbaalba	13
2093	WF08	Deverra_tortuosa	10
2094	WF08	Centaurea_scoparia	5
2095	WF08	Echinops_glaberrimus	22
2096	WF08	Zilla_spinosa	20
2097	WF08	Tanacetum_sinaicum	11
2098	WF08	Polygala_sinaica	10
2099	WF08	Teucrium_polium	1
2100	WF08	Phlomis_aurea	4
2101	WF08	Chiliadenus_montanus	8
2102	WF08	Plantago_sinaica	2
2103	WF08	Fagonia_arabica	1
2104	WF08	Callipeltis_cucullaris	1
2105	WG01	Seraphidium_herbaalba	29
2106	WG01	Polygala_sinaica	5
2107	WG01	Euphorbia_sanctae-catharinae	21
2108	WG01	Lappula_sinaica	4
2109	WG01	Diplotaxis_harra	8
2110	WG01	Matthiola_longipetala	2
2111	WG02	Stachys_aegyptiaca	2
2112	WG02	Galium_setaceum	2
2113	WG02	Euphorbia_sanctae-catharinae	21
2114	WG02	Scariola_orientalis	2
2115	WG02	Diplotaxis_harra	16
2116	WG02	Tanacetum_sinaicum	3
2117	WG02	Ballota_undulata	1
2118	WG02	Lappula_sinaica	4
2119	WG02	Chiliadenus_montanus	2
2120	WG02	Plantago_sinaica	2
2121	WG02	Teucrium_polium	4
2122	WG02	Zilla_spinosa	1
2123	WG02	Seraphidium_herbaalba	2
2124	WG02	Alkanna_orientalis	2
2125	WG02	Deverra_tortuosa	1
2126	WG02	Globularia_arabica	1
2127	WG03	Lappula_sinaica	47
2128	WG03	Diplotaxis_harra	9
2129	WG03	Alkanna_orientalis	2
2130	WG03	Euphorbia_sanctae-catharinae	29
2131	WG03	Scariola_orientalis	21
2132	WG03	Centaurea_scoparia	4
2133	WG03	Polygala_sinaica	5
2134	WG03	Achillea_fragrantissima	1
2135	WG03	Tanacetum_sinaicum	1
2136	WG03	Seraphidium_herbaalba	3
2137	WG03	Zilla_spinosa	3
2138	WG03	Gomphocarpus_sinaicus	1
2139	WG03	Teucrium_polium	1
2140	WG04	Euphorbia_sanctae-catharinae	23
2141	WG04	Pulicaria_undulata	3

2142	WG04	Alkanna_orientalis	16
2143	WG04	Scariola_orientalis	29
2144	WG04	Plantago_sinaica	5
2145	WG04	Achillea_fragrantissima	45
2146	WG04	Tanacetum_sinaicum	1
2147	WG04	Teucrium_polium	2
2148	WG04	Verbascum_sinaiticum	11
2149	WG04	Lappula_sinaica	3
2150	WG04	Phlomis_aurea	1
2151	WG04	Seraphidium_herbaalba	3
2152	WG04	Ephedra_alata	1
2153	WG04	Diplotaxis_harra	3
2154	WG04	Pulicaria_arabica	21
2155	WG04	Mentha_longifolia	3
2156	WG04	Deverra_triradiata	1
2157	WG04	Zilla_spinosa	1
2158	WG04	Stachys_aegyptiaca	2
2159	WG04	Tanacetum_sinaicum	1
2160	WG05	Alkanna_orientalis	8
2161	WG05	Achillea_fragrantissima	52
2162	WG05	Lappula_sinaica	11
2163	WG05	Pulicaria_undulata	11
2164	WG05	Echinops_spinosus	1
2165	WG05	Euphorbia_sanctae-catharinae	25
2166	WG05	Scariola_orientalis	12
2167	WG05	Seraphidium_herbaalba	7
2168	WG05	Fagonia_mollis	6
2169	WG05	Verbascum_sinaiticum	13
2170	WG05	Diplotaxis_harra	5
2171	WG05	Tanacetum_sinaicum	1
2172	WG05	Stachys_aegyptiaca	1
2173	WG05	Polygala_sinaica	1
2174	WG05	Deverra_triradiata	2
2175	WG05	Zilla_spinosa	1
2176	WG05	Chiliadenus_montanus	1
2177	WG05	Anarrhinum_pubescens	1
2178	WG06	Achillea_fragrantissima	9
2179	WG06	Teucrium_polium	11
2180	WG06	Euphorbia_sanctae-catharinae	34
2181	WG06	Lappula_sinaica	13
2182	WG06	Tanacetum_sinaicum	3
2183	WG06	Scariola_orientalis	32
2184	WG06	Diplotaxis_harra	10
2185	WG06	Ephedra_alata	4
2186	WG06	Seraphidium_herbaalba	7
2187	WG06	Deverra_triradiata	1
2188	WG06	Thymus_decussatus	1
2189	WG06	Plantago_sinaica	11
2190	WG06	Phlomis_aurea	1
2191	WG06	Centaurea_eryngioides	1

2192	WG07	Tanacetum_sinaicum	1
2193	WG07	Zilla_spinosa	7
2194	WG07	Fagonia_mollis	22
2195	WG07	Stachys_aegyptiaca	9
2196	WG07	Scariola_orientalis	6
2197	WG07	Alkanna_orientalis	2
2198	WG07	Carduus_pycnocephalus	2
2199	WG07	Diplotaxis_harra	7
2200	WG07	Deverra_triradiata	1
2201	WG07	Peganum_harmala	2
2202	WG07	Teucrium_polium	1
2203	WG08	Euphorbia_sanctae-catharinae	3
2204	WG08	Lappula_sinaica	2
2205	WG08	Seraphidium_herbaalba	1
2206	WG08	Zilla_spinosa	6
2207	WG08	Achillea_fragrantissima	10
2208	WG08	Alkanna_orientalis	4
2209	WG08	Plantago_sinaica	1
2210	WG08	Scariola_orientalis	1
2211	WG09	Euphorbia_sanctae-catharinae	9
2212	WG09	Seraphidium_herbaalba	4
2213	WG09	Fagonia_mollis	45
2214	WG09	Gymnocarpus_decandrum	16
2215	WG09	Diplotaxis_harra	7
2216	WG09	Zilla_spinosa	4
2217	WG09	Lappula_sinaica	26
2218	WG09	Stachys_aegyptiaca	22
2219	WG09	Chiliadenus_montanus	2
2220	WG09	Ephedra_alata	1
2221	WG09	Echinops_glaberrimus	1
2222	WG09	Scariola_orientalis	1
2223	WG09	Centaurea_eryngioides	1
2224	WG09	Achillea_fragrantissima	1
2225	WG10	Gymnocarpus_decandrum	56
2226	WG10	Lappula_sinaica	16
2227	WG10	Globularia_arabica	5
2228	WG10	Zilla_spinosa	1
2229	WG10	Stachys_aegyptiaca	11
2230	WG10	Diplotaxis_harra	10
2231	WG10	Teucrium_polium	3
2232	WG10	Seraphidium_herbaalba	3
2233	WG10	Deverra_tortuosa	4
2234	WG10	Chiliadenus_montanus	2
2235	WG10	Tanacetum_sinaicum	1
2236	WG11	Diplotaxis_harra	7
2237	WG11	Fagonia_arabica	4
2238	WG11	Seraphidium_herbaalba	2
2239	WG11	Lappula_sinaica	12
2240	WG11	Stachys_aegyptiaca	9
2241	WG11	Centaurea_solstitialis	3

2242	WG11	Farsetia_aegyptia	2
2243	WG11	Carduus_pycnocephalus	5
2244	WG11	Zilla_spinosa	8
2245	WG12	Gymnocarpus_decandrum	1
2246	WG12	Diplotaxis_harra	12
2247	WG12	Stachys_aegyptiaca	19
2248	WG12	Zilla_spinosa	6
2249	WG12	Lappula_sinaica	4
2250	WG12	Scariola_orientalis	4
2251	WG12	Carduus_pycnocephalus	5
2252	WG12	Fagonia_mollis	1
2253	WG12	Seraphidium_herbaalba	1
2254	WG12	Centaurea_solstitialis	16
2255	WG12	Pulicaria_arabica	3
2256	WG12	Farsetia_aegyptia	3
2257	WG12	Tanacetum_sinaicum	1
2258	WG12	Fagonia_arabica	2
2259	WG12	Phlomis_aurea	1
2260	WG12	Teucrium_polium	1
2261	WG12	Scariola_orientalis	4
2262	WG12	Gomphocarpus_sinaicus	2
2263	WG13	Fagonia_arabica	9
2264	WG13	Gymnocarpus_decandrum	3
2265	WG13	Scariola_orientalis	8
2266	WG13	Chiliadenus_montanus	8
2267	WG13	Alkanna_orientalis	14
2268	WG13	Lappula_sinaica	8
2269	WG13	Achillea_fragrantissima	6
2270	WG13	Diplotaxis_harra	1
2271	WG13	Zilla_spinosa	8
2272	WG13	Seraphidium_herbaalba	1
2273	WG13	Stachys_aegyptiaca	8
2274	WG13	Fagonia_mollis	1
2275	WG13	Pulicaria_undulata	3
2276	WG13	Verbascum_sinaiticum	2
2277	WG13	Galium_setaceum	1
2278	WG13	Teucrium_polium	1
2279	WG14	Zilla_spinosa	6
2280	WG14	Mentha_longifolia	16
2281	WG14	Alkanna_orientalis	7
2282	WG14	Pulicaria_undulata	30
2283	WG14	Verbascum_sinaiticum	20
2284	WG14	Chiliadenus_montanus	1
2285	WG14	Fagonia_mollis	3
2286	WG14	Deverra_triradiata	3
2287	WG14	Matthiola_longipetala	1
2288	WG14	Achillea_fragrantissima	2
2289	WG14	Pulicaria_arabica	2
2290	WG14	Salix_mucronata	1
2291	WG14	Phlomis_aurea	1

2292	WG15	Juncus_rigidus	14
2293	WG15	Achillea_fragrantissima	16
2294	WG15	Pulicaria_arabica	5
2295	WG15	Plantago_sinaica	14
2296	WG15	Globularia_arabica	2
2297	WG15	Stachys_aegyptiaca	2
2298	WG15	Galium_setaceum	11
2299	WG15	Chiliadenus_montanus	5
2300	WG15	Alkanna_orientalis	1
2301	WG15	Teucrium_polium	5
2302	WG15	Tanacetum_sinaicum	3
2303	WG15	Diplotaxis_harra	2
2304	WG15	Pterocephalus_sanctus	1
2305	WG15	Euphorbia_sanctae-catharinae	1
2306	WG15	Phlomis_aurea	3
2307	WG15	Verbascum_sinaiticum	1
2308	WG15	Seraphidium_herbaalba	1
2309	WG15	Mentha_longifolia	3
2310	WG15	Salix_mucronata	1
2311	WG16	Rubus_sanctus	3
2312	WG16	Equisetum_ramosissimum	3
2313	WG16	Pulicaria_arabica	8
2314	WG16	Pulicaria_undulata	16
2315	WG16	Zilla_spinosa	3
2316	WG16	Alkanna_orientalis	6
2317	WG16	Heliotropium_arbainense	1
2318	WG16	Verbascum_sinaiticum	4
2319	WG16	Mentha_longifolia	10
2320	WG16	Salix_mucronata	1
2321	WG16	Achillea_fragrantissima	2
2322	WG16	Ficus_palmata	1
2323	WG16	Adiantum_capillus-veneris	1
2324	WG16	Crataegus_x_sinaica	1
2325	WJ01	Fagonia_mollis	153
2326	WJ01	Launaea_spinosa	1
2327	WJ01	Fagonia_arabica	1
2328	WJ01	Alkanna_orientalis	4
2329	WJ01	Caylusea_hexagyna	1
2330	WJ01	Matthiola_longipetala	11
2331	WJ01	Zilla_spinosa	8
2332	WJ01	Lavandula_pubescens	2
2333	WJ01	Teucrium_polium	3
2334	WJ01	Callipeltis_cucullaris	1
2335	WJ01	Origanum_syriacum	1
2336	WJ01	Astragalus_spinosus	1
2337	WJ01	Gymnocarpus_decandrum	2
2338	WJ02	Phlomis_aurea	2
2339	WJ02	Fagonia_mollis	50
2340	WJ02	Teucrium_polium	10
2341	WJ02	Zilla_spinosa	9

2342	WJ02	Echinops_glaberrimus	1
2343	WJ02	Callipeltis_cucullaris	19
2344	WJ02	Stachys_aegyptiaca	1
2345	WJ02	Iphiona_scabra	1
2346	WJ02	Caylusea_hexagyna	2
2347	WJ02	Fagonia_arabica	1
2348	WJ02	Gymnocarpus_decandrum	4
2349	WJ02	Reseda_pruinosa	1
2350	WJ02	Gomphocarpus_sinaicus	1
2351	WJ02	Matthiola_longipetala	2
2352	WJ02	Pulicaria_undulata	1
2353	WJ02	Origanum_syriacum	1
2354	WJ02	Launaea_spinosa	1
2355	WJ02	Farsetia_aegyptia	1
2356	WJ03	Echinops_glaberrimus	1
2357	WJ03	Tanacetum_sinaicum	2
2358	WJ03	Stachys_aegyptiaca	5
2359	WJ03	Monsonia_nivea	1
2360	WJ03	Fagonia_mollis	12
2361	WJ03	Phlomis_aurea	9
2362	WJ03	Matthiola_longipetala	1
2363	WJ03	Gymnocarpus_decandrum	1
2364	WJ03	Centaurea_scoparia	1
2365	WJ03	Fagonia_arabica	1
2366	WJ03	Zilla_spinosa	2
2367	WJ03	Silene_linearis	1
2368	WJ03	Deverra_tortuosa	2
2369	WJ03	Teucrium_polium	4
2370	WJ03	Anarrhinum_pubescens	1
2371	WJ04	Seraphidium_herbaalba	42
2372	WJ04	Fagonia_mollis	20
2373	WJ04	Gymnocarpus_decandrum	10
2374	WJ04	Matthiola_longipetala	3
2375	WJ04	Deverra_tortuosa	2
2376	WJ04	Zilla_spinosa	2
2377	WJ04	Tanacetum_sinaicum	1
2378	WJ04	Stachys_aegyptiaca	6
2379	WJ04	Centaurea_scoparia	3
2380	WJ04	Chiliadenus_montanus	1
2381	WJ05	Zilla_spinosa	24
2382	WJ05	Tanacetum_sinaicum	4
2383	WJ05	Centaurea_scoparia	4
2384	WJ05	Echinops_glaberrimus	3
2385	WJ05	Seraphidium_herbaalba	16
2386	WJ05	Teucrium_polium	1
2387	WJ05	Matthiola_longipetala	4
2388	WJ05	Chiliadenus_montanus	1
2389	WJ05	Fagonia_arabica	33
2390	WJ05	Deverra_tortuosa	1
2391	WJ05	Stachys_aegyptiaca	1

2392	WJ05	Gymnocarpus_decandrum	1
2393	WJ06	Deverra_tortuosa	1
2394	WJ06	Tanacetum_sinaicum	31
2395	WJ06	Chiliadenus_montanus	3
2396	WJ06	Echinops_glaberrimus	2
2397	WJ06	Phlomis_aurea	1
2398	WJ06	Seraphidium_herbaalba	54
2399	WJ06	Gymnocarpus_decandrum	6
2400	WJ06	Ballota_undulata	1
2401	WJ06	Teucrium_polium	1
2402	WJ06	Verbascum_decaisneanum	1
2403	WJA01	Fagonia_mollis	15
2404	WJA01	Seraphidium_herbaalba	23
2405	WJA01	Alkanna_orientalis	2
2406	WJA01	Fagonia_arabica	3
2407	WJA01	Tanacetum_sinaicum	4
2408	WJA01	Zilla_spinosa	3
2409	WJA01	Diplotaxis_harra	1
2410	WJA01	Gomphocarpus_sinaicus	2
2411	WJA01	Stachys_aegyptiaca	1
2412	WJA02	Matthiola_longipetala	2
2413	WJA02	Origanum_syriacum	6
2414	WJA02	Echinops_spinosus	5
2415	WJA02	Galium_setaceum	2
2416	WJA02	Achillea_fragrantissima	2
2417	WJA02	Phlomis_aurea	2
2418	WJA02	Gomphocarpus_sinaicus	1
2419	WJA02	Ballota_undulata	1
2420	WJA02	Stachys_aegyptiaca	7
2421	WJA02	Alkanna_orientalis	3
2422	WJA02	Ballota_saxatilis	1
2423	WJA02	Teucrium_polium	2
2424	WJA02	Zilla_spinosa	1
2425	WJA02	Nepeta_septemcrenata	1
2426	WJA02	Anarrhinum_pubescens	1
2427	WJA03	Crataegus_x_sinaica	1
2428	WJA03	Matthiola_longipetala	2
2429	WJA03	Ephedra_alata	1
2430	WJA03	Phlomis_aurea	6
2431	WJA03	Origanum_syriacum	4
2432	WJA03	Verbascum_decaisneanum	1
2433	WJA03	Echinops_spinosus	6
2434	WJA03	Diplotaxis_harra	1
2435	WJA03	Teucrium_polium	1
2436	WJA03	Tanacetum_sinaicum	4
2437	WJA03	Echinops_glaberrimus	2
2438	WJA03	Ballota_undulata	1
2439	WJA03	Stachys_aegyptiaca	1
2440	WJA03	Phagnalon_nitidum	1
2441	WJA03	Nepeta_septemcrenata	3

2442	WJA03	Callipeltis_cucullaris	1
2443	WJA03	Silene_schimperiana	1
2444	WJA03	Seraphidium_herbaalba	1
2445	WJA03	Zilla_spinosa	1
2446	WJA03	Galium_setaceum	1
2447	WJA03	Scariola_orientalis	2
2448	WJA03	Anarrhinum_pubescens	1
2449	WJA03	Iphiona_mucronata	1
2450	WJA04	Matthiola_longipetala	15
2451	WJA04	Tanacetum_sinaicum	14
2452	WJA04	Chiliadenus_montanus	3
2453	WJA04	Verbascum_decaisneanum	2
2454	WJA04	Zilla_spinosa	3
2455	WJA04	Stachys_aegyptiaca	8
2456	WJA04	Anarrhinum_pubescens	1
2457	WJA04	Teucrium_polium	4
2458	WJA04	Centaurea_scoparia	3
2459	WJA04	Deverra_tortuosa	1
2460	WJA04	Alkanna_orientalis	1
2461	WJA04	Plantago_sinaica	1
2462	WJA04	Seraphidium_herbaalba	1
2463	WJA04	Galium_setaceum	1
2464	WJA04	Gymnocarpus_decandrum	1
2465	WJA05	Fagonia_arabica	3
2466	WJA05	Tanacetum_sinaicum	6
2467	WJA05	Nepeta_septemcrenata	1
2468	WJA05	Centaurea_scoparia	10
2469	WJA05	Chiliadenus_montanus	6
2470	WJA05	Gymnocarpus_decandrum	4
2471	WJA05	Stachys_aegyptiaca	9
2472	WJA05	Silene_linearis	1
2473	WJA05	Ephedra_alata	1
2474	WJA05	Globularia_arabica	2
2475	WJA05	Deverra_tortuosa	1
2476	WJA05	Teucrium_polium	3
2477	WJA05	Galium_setaceum	1
2478	WJA05	Matthiola_longipetala	10
2479	WJA05	Echinops_glaberrimus	5
2480	WJA05	Iphiona_mucronata	4
2481	WJA05	Phlomis_aurea	1
2482	WJA05	Heliotropium_arbainense	1
2483	WJA05	Plantago_sinaica	1
2484	WJA05	Verbascum_decaisneanum	2
2485	WJA06	Phlomis_aurea	8
2486	WJA06	Teucrium_polium	3
2487	WJA06	Nepeta_septemcrenata	4
2488	WJA06	Polygala_sinaica	1
2489	WJA06	Tanacetum_sinaicum	8
2490	WJA06	Seraphidium_herbaalba	2
2491	WJA06	Echinops_glaberrimus	5

2492	WJA06	Matthiola_longipetala	2
2493	WJA06	Alkanna_orientalis	1
2494	WJA06	Echinops_spinosus	3
2495	WJA06	Plantago_sinaica	1
2496	WJA06	Ballota_undulata	1
2497	WJA06	Verbascum_decaisneanum	1
2498	WJA07	Pterocephalus_sanctus	3
2499	WJA07	Tanacetum_sinaicum	14
2500	WJA07	Plantago_sinaica	1
2501	WJA07	Nepeta_septemcrenata	3
2502	WJA07	Silene_schimperiana	1
2503	WJA07	Ballota_undulata	2
2504	WJA07	Polygala_sinaica	2
2505	WJA07	Echinops_glaberrimus	2
2506	WJA08	Rhamnus_dispermus	1
2507	WJA08	Phlomis_aurea	3
2508	WJA08	Tanacetum_sinaicum	15
2509	WJA08	Galium_setaceum	1
2510	WJA08	Alkanna_orientalis	3
2511	WJA08	Seraphidium_herbaalba	14
2512	WJA08	Teucrium_polium	3
2513	WJA08	Chiliadenus_montanus	2
2514	WJA08	Verbascum_decaisneanum	2
2515	WJA08	Matthiola_longipetala	3
2516	WJA08	Deverra_tortuosa	1
2517	WJA08	Thymus_decussatus	3
2518	WJA09	Tanacetum_sinaicum	8
2519	WJA09	Seraphidium_herbaalba	3
2520	WJA09	Juncus_rigidus	10
2521	WJA09	Matthiola_longipetala	11
2522	WJA09	Pulicaria_undulata	15
2523	WJA09	Nepeta_septemcrenata	3
2524	WJA09	Plantago_sinaica	1
2525	WJA09	Verbascum_decaisneanum	7
2526	WJA09	Mentha_longifolia	9
2527	WJA09	Echinops_glaberrimus	1
2528	WJA10	Phlomis_aurea	2
2529	WJA10	Rhamnus_dispermus	1
2530	WJA10	Teucrium_polium	5
2531	WJA10	Tanacetum_sinaicum	15
2532	WJA10	Plantago_sinaica	13
2533	WJA10	Galium_setaceum	3
2534	WJA10	Echinops_spinosus	3
2535	WJA10	Matthiola_longipetala	8
2536	WJA10	Echinops_glaberrimus	7
2537	WJA10	Seraphidium_herbaalba	2
2538	WJA10	Silene_schimperiana	3
2539	WJA10	Pterocephalus_sanctus	1
2540	WJA10	Silene_linearis	1
2541	WJA10	Diplotaxis_harra	1

2542	WJA11	Crataegus_x_sinaica	1
2543	WJA11	Rhamnus_dispermus	1
2544	WJA11	Galium_setaceum	3
2545	WJA11	Tanacetum_sinaicum	22
2546	WJA11	Stipa_parviflora	6
2547	WJA11	Nepeta_septemcrenata	4
2548	WJA11	Teucrium_polium	1
2549	WJA11	Phlomis_aurea	2
2550	WJA12	Chiliadenus_montanus	2
2551	WJA12	Cotoneaster_orbicularis	7
2552	WJA12	Teucrium_polium	18
2553	WJA12	Tanacetum_sinaicum	47
2554	WJA12	Astragalus_echinus	2
2555	WJA12	Pterocephalus_sanctus	4
2556	WJA12	Echinops_glaberrimus	4
2557	WJA12	Polygala_sinaica	2
2558	WJA12	Crataegus_x_sinaica	1
2559	WJA12	Verbascum_decaisneanum	1
2560	WJA13	Teucrium_polium	43
2561	WJA13	Tanacetum_sinaicum	47
2562	WJA13	Centaurea_scoparia	6
2563	WJA13	Pterocephalus_sanctus	1
2564	WJA13	Chiliadenus_montanus	2
2565	WJA13	Thymus_decussatus	15
2566	WJA13	Globularia_arabica	1
2567	WJA14	Polygala_sinaica	14
2568	WJA14	Tanacetum_sinaicum	1
2569	WJA14	Colchicum_guessfeldtianum	2
2570	WJA15	Tanacetum_sinaicum	30
2571	WJA15	Thymus_decussatus	16
2572	WJA15	Seraphidium_herbaalba	18
2573	WJA15	Teucrium_polium	7
2574	WL01	Zilla_spinosa	7
2575	WL01	Artemisia_judaica	29
2576	WL01	Alkanna_orientalis	4
2577	WL01	Fagonia_mollis	24
2578	WL01	Diplotaxis_acris	2
2579	WL01	Solanum_sinaicum	1
2580	WL01	Diplotaxis_harra	6
2581	WL01	Teucrium_polium	3
2582	WL01	Hypericum_sinaicum	4
2583	WL01	Deverra_tortuosa	13
2584	WL01	Achillea_fragrantissima	3
2585	WL01	Reseda_pruinosa	2
2586	WL01	Fagonia_arabica	1
2587	WL01	Echinops_glaberrimus	2
2588	WL01	Stachys_aegyptiaca	1
2589	WL01	Capparis_spinosa	1
2590	WL01	Citrullus_colocynthis	1
2591	WL01	Chiliadenus_montanus	1

2592	WL01	Caylusea_hexagyna	1
2593	WL01	Lavandula_pubescens	1
2594	WL01	Matthiola_longipetala	3
2595	WL01	Launaea_spinosa	1
2596	WL02	Launaea_spinosa	3
2597	WL02	Zilla_spinosa	4
2598	WL02	Reseda_pruinosa	16
2599	WL02	Echinops_glaberrimus	1
2600	WL02	Teucrium_polium	2
2601	WL02	Fagonia_mollis	22
2602	WL02	Stachys_aegyptiaca	2
2603	WL02	Fagonia_arabica	23
2604	WL02	Cleome_arabica	2
2605	WL02	Diplotaxis_harra	2
2606	WL02	Gymnocarpus_decandrum	1
2607	WL02	Pulicaria_incisa	33
2608	WL02	Citrullus_colocynthis	1
2609	WL03	Fagonia_mollis	11
2610	WL03	Diplotaxis_harra	9
2611	WL03	Pulicaria_incisa	7
2612	WL03	Reseda_pruinosa	4
2613	WL03	Stachys_aegyptiaca	3
2614	WL03	Zilla_spinosa	13
2615	WL03	Cleome_arabica	1
2616	WL03	Fagonia_arabica	8
2617	WL03	Hypericum_sinaicum	3
2618	WL03	Chiliadenus_montanus	1
2619	WL03	Diplotaxis_acris	1
2620	WL03	Lavandula_pubescens	4
2621	WL03	Citrullus_colocynthis	1
2622	WL03	Alkanna_orientalis	3
2623	WL03	Farsetia_aegyptia	1
2624	WL03	Launaea_spinosa	3
2625	WL03	Centaurea_scoparia	1
2626	WL03	Echinops_spinosus	3
2627	WL03	Teucrium_polium	2
2628	WL03	Iphiona_mucronata	2
2629	WL03	Iphiona_scabra	1
2630	WL03	Ballota_undulata	1
2631	WL03	Gymnocarpus_decandrum	1
2632	WL04	Echinops_spinosus	2
2633	WL04	Lavandula_pubescens	12
2634	WL04	Launaea_spinosa	3
2635	WL04	Stachys_aegyptiaca	2
2636	WL04	Teucrium_polium	2
2637	WL04	Diplotaxis_harra	3
2638	WL04	Pulicaria_incisa	1
2639	WL04	Ballota_undulata	1
2640	WL04	Anarrhinum_pubescens	3
2641	WL04	Iphiona_mucronata	3

2642	WL04	Gymnocarpus_decandrum	1
2643	WL04	Matthiola_longipetala	1
2644	WL04	Zilla_spinosa	1
2645	WL04	Caylusea_hexagyna	1
2646	WL04	Reseda_pruinosa	1
2647	WL04	Fagonia_arabica	1
2648	WL04	Fagonia_mollis	1
2649	WL04	Capparis_spinosa	1
2650	WL04	Solanum_sinaicum	1
2651	WL04	Deverra_tortuosa	1
2652	WL05	Fagonia_mollis	37
2653	WL05	Stachys_aegyptiaca	7
2654	WL05	Phlomis_aurea	3
2655	WL05	Echinops_spinosus	15
2656	WL05	Centaurea_scoparia	4
2657	WL05	Diplotaxis_harra	13
2658	WL05	Teucrium_polium	3
2659	WL05	Matthiola_longipetala	3
2660	WL05	Farsetia_aegyptia	1
2661	WL05	Alkanna_orientalis	2
2662	WL05	Zilla_spinosa	21
2663	WL05	Caylusea_hexagyna	8
2664	WL05	Achillea_fragrantissima	5
2665	WL05	Gymnocarpus_decandrum	1
2666	WL05	Fagonia_arabica	3
2667	WL05	Iphiona_mucronata	2
2668	WL05	Launaea_spinosa	1
2669	WL05	Deverra_tortuosa	2
2670	WL06	Fagonia_mollis	123
2671	WL06	Diplotaxis_acris	1
2672	WL06	Diplotaxis_harra	41
2673	WL06	Fagonia_arabica	1
2674	WL06	Matthiola_longipetala	1
2675	WL06	Zilla_spinosa	11
2676	WL06	Echinops_spinosus	3
2677	WL06	Stachys_aegyptiaca	3
2678	WL06	Seraphidium_herbaalba	3
2679	WL06	Ephedra_alata	2
2680	WL06	Gymnocarpus_decandrum	4
2681	WL06	Farsetia_aegyptia	3
2682	WL06	Iphiona_mucronata	1
2683	WL07	Seraphidium_herbaalba	17
2684	WL07	Tanacetum_sinaicum	3
2685	WL07	Fagonia_mollis	121
2686	WL07	Gymnocarpus_decandrum	12
2687	WL07	Diplotaxis_harra	74
2688	WL07	Ballota_undulata	1
2689	WL07	Reaumuria_hirtella	3
2690	WL07	Centaurea_scoparia	7
2691	WL07	Zilla_spinosa	10

2692	WL07	Matthiola_longipetala	6
2693	WL07	Chiliadenus_montanus	1
2694	WL07	Stachys_aegyptiaca	2
2695	WL07	Teucrium_polium	3
2696	WL08	Iphiona_mucronata	5
2697	WL08	Plantago_sinaica	1
2698	WL08	Chiliadenus_montanus	13
2699	WL08	Galium_setaceum	2
2700	WL08	Teucrium_polium	3
2701	WL08	Gymnocarpus_decandrum	21
2702	WL08	Deverra_tortuosa	4
2703	WL08	Seraphidium_herbaalba	1
2704	WL08	Diplotaxis_harra	29
2705	WL08	Stachys_aegyptiaca	6
2706	WL08	Tanacetum_sinaicum	10
2707	WL08	Reaumuria_hirtella	3
2708	WL08	Verbascum_decaisneanum	1
2709	WL08	Anarrhinum_pubescens	1
2710	WL08	Globularia_arabica	1
2711	WMS01	Fagonia_mollis	45
2712	WMS01	Seraphidium_herbaalba	7
2713	WMS01	Teucrium_polium	4
2714	WMS01	Stachys_aegyptiaca	18
2715	WMS01	Lotononis_dichotoma	3
2716	WMS01	Alkanna_orientalis	9
2717	WMS01	Matthiola_longipetala	4
2718	WMS01	Echinops_glaberrimus	3
2719	WMS01	Caylusea_hexagyna	2
2720	WMS01	Deverra_tortuosa	2
2721	WMS01	Bufonia_multiceps	2
2722	WMS01	Ephedra_alata	3
2723	WMS01	Zilla_spinosa	2
2724	WMS02	Chiliadenus_montanus	6
2725	WMS02	Galium_setaceum	6
2726	WMS02	Matthiola_longipetala	9
2727	WMS02	Alkanna_orientalis	1
2728	WMS02	Teucrium_polium	3
2729	WMS02	Achillea_fragrantissima	1
2730	WMS02	Tanacetum_sinaicum	2
2731	WMS02	Origanum_syriacum	8
2732	WMS02	Phlomis_aurea	2
2733	WMS02	Callipeltis_cucullaris	2
2734	WMS02	Stachys_aegyptiaca	1
2735	WMS02	Ballota_saxatilis	1
2736	WMS02	Ficus_palmata	2
2737	WMS02	Crataegus_x_sinaica	1
2738	WMS02	Verbascum_sinaiticum	7
2739	WMS02	Fagonia_mollis	2
2740	WMS03	Ballota_undulata	4
2741	WMS03	Tanacetum_sinaicum	3

2742	WMS03	Chiliadenus_montanus	2
2743	WMS03	Pterocephalus_sanctus	8
2744	WMS03	Origanum_syriacum	14
2745	WMS03	Plantago_sinaica	2
2746	WMS03	Phlomis_aurea	1
2747	WMS03	Alkanna_orientalis	3
2748	WMS03	Matthiola_longipetala	5
2749	WMS03	Achillea_fragrantissima	1
2750	WMS03	Galium_setaceum	5
2751	WMS03	Nepeta_septemcrenata	11
2752	WMS03	Mentha_longifolia	7
2753	WMS03	Crataegus_x_sinaica	2
2754	WMS03	Echinops_glaberrimus	2
2755	WMS03	Echinops_spinosus	2
2756	WMS03	Teucrium_polium	1
2757	WMS03	Adiantum_capillus-veneris	1
2758	WMS03	Callipeltis_cucullaris	1
2759	WMS03	Ficus_palmata	1
2760	WMS03	Verbascum_sinaiticum	1
2761	WMS03	Hypericum_sinaicum	2
2762	WMS03	Pterocephalus_sanctus	1
2763	WMS04	Echinops_spinosus	10
2764	WMS04	Chiliadenus_montanus	3
2765	WMS04	Teucrium_polium	33
2766	WMS04	Seraphidium_herbaalba	24
2767	WMS04	Centaurea_scoparia	19
2768	WMS04	Stachys_aegyptiaca	25
2769	WMS04	Matthiola_longipetala	18
2770	WMS04	Phlomis_aurea	9
2771	WMS04	Galium_setaceum	3
2772	WMS04	Tanacetum_sinaicum	8
2773	WMS04	Deverra_tortuosa	2
2774	WMS04	Echinops_glaberrimus	9
2775	WMS04	Ballota_undulata	2
2776	WMS04	Origanum_syriacum	1
2777	WMS05	Matthiola_longipetala	33
2778	WMS05	Deverra_tortuosa	5
2779	WMS05	Seraphidium_herbaalba	23
2780	WMS05	Stachys_aegyptiaca	10
2781	WMS05	Deverra_tortuosa	19
2782	WMS05	Echinops_spinosus	4
2783	WMS05	Echinops_glaberrimus	2
2784	WMS05	Colchicum_guessfeldtianum	1
2785	WS01	Phlomis_aurea	3
2786	WS01	Achillea_fragrantissima	18
2787	WS01	Fagonia_mollis	9
2788	WS01	Alkanna_orientalis	15
2789	WS01	Deverra_tortuosa	4
2790	WS01	Echinops_glaberrimus	9
2791	WS01	Teucrium_polium	3

2792	WS01	Chiliadenus_montanus	1
2793	WS01	Anarrhinum_pubescens	8
2794	WS01	Tanacetum_sinaicum	9
2795	WS01	Matthiola_longipetala	11
2796	WS01	Seraphidium_herbaalba	4
2797	WS01	Deverra_triradiata	1
2798	WS01	Centaurea_eryngioides	2
2799	WS01	Callipeltis_cucullaris	2
2800	WS01	Zilla_spinosa	3
2801	WS01	Stachys_aegyptiaca	1
2802	WS02	Fagonia_arabica	5
2803	WS02	Fagonia_mollis	46
2804	WS02	Seraphidium_herbaalba	129
2805	WS02	Stachys_aegyptiaca	8
2806	WS02	Chiliadenus_montanus	8
2807	WS02	Farsetia_aegyptia	1
2808	WS02	Anarrhinum_pubescens	1
2809	WS02	Tanacetum_sinaicum	3
2810	WS02	Verbascum_decaisneanum	4
2811	WS03	Seraphidium_herbaalba	33
2812	WS03	Fagonia_arabica	31
2813	WS03	Fagonia_mollis	43
2814	WS03	Matthiola_longipetala	1
2815	WS03	Zilla_spinosa	8
2816	WS03	Chiliadenus_montanus	1
2817	WS03	Reseda_muricata	2
2818	WS03	Stachys_aegyptiaca	1
2819	WS03	Farsetia_aegyptia	1
2820	WS04	Origanum_syriacum	3
2821	WS04	Echinops_glaberrimus	26
2822	WS04	Zilla_spinosa	6
2823	WS04	Fagonia_arabica	23
2824	WS04	Matthiola_longipetala	17
2825	WS04	Fagonia_mollis	12
2826	WS04	Seraphidium_herbaalba	7
2827	WS04	Callipeltis_cucullaris	6
2828	WS04	Anarrhinum_pubescens	7
2829	WS04	Gomphocarpus_sinaicus	1
2830	WS04	Stachys_aegyptiaca	9
2831	WS04	Tanacetum_sinaicum	3
2832	WS04	Teucrium_polium	3
2833	WS04	Phlomis_aurea	8
2834	WS04	Farsetia_aegyptia	2
2835	WS04	Chiliadenus_montanus	1
2836	WS04	Deverra_tortuosa	1
2837	WS05	Fagonia_arabica	166
2838	WS05	Fagonia_mollis	246
2839	WS05	Seraphidium_herbaalba	19
2840	WS05	Zilla_spinosa	20
2841	WS05	Matthiola_longipetala	30

2842	WS05	Achillea_fragrantissima	1
2843	WS05	Farsetia_aegyptia	1
2844	WS05	Chiliadenus_montanus	4
2845	WS05	Stachys_aegyptiaca	4
2846	WS05	Alkanna_orientalis	1
2847	WS06	Matthiola_longipetala	52
2848	WS06	Fagonia_mollis	82
2849	WS06	Seraphidium_herbaalba	40
2850	WS06	Teucrium_polium	37
2851	WS06	Stachys_aegyptiaca	15
2852	WS06	Chiliadenus_montanus	28
2853	WS06	Ballota_undulata	3
2854	WS06	Tanacetum_sinaicum	13
2855	WS06	Caylusea_hexagyna	1
2856	WS06	Fagonia_arabica	2
2857	WS06	Anarrhinum_pubescens	2
2858	WS06	Iphiona_mucronata	2
2859	WS06	Alkanna_orientalis	1
2860	WS06	Deverra_tortuosa	1
2861	WS07	Matthiola_longipetala	12
2862	WS07	Seraphidium_herbaalba	52
2863	WS07	Achillea_fragrantissima	2
2864	WS07	Teucrium_polium	25
2865	WS07	Chiliadenus_montanus	1
2866	WS07	Fagonia_mollis	15
2867	WS07	Anarrhinum_pubescens	6
2868	WS07	Echinops_glaberrimus	9
2869	WS07	Origanum_syriacum	3
2870	WS07	Tanacetum_sinaicum	14
2871	WS07	Phlomis_aurea	3
2872	WS07	Chiliadenus_montanus	13
2873	WS07	Deverra_tortuosa	4
2874	WS07	Ballota_undulata	2
2875	WS07	Fagonia_arabica	1
2876	WS07	Stachys_aegyptiaca	1
2877	WS07	Alkanna_orientalis	1
2878	WS08	Centaurea_eryngioides	1
2879	WS08	Anarrhinum_pubescens	14
2880	WS08	Ballota_undulata	6
2881	WS08	Diplotaxis_harra	21
2882	WS08	Seraphidium_herbaalba	60
2883	WS08	Anarrhinum_pubescens	1
2884	WS08	Teucrium_polium	25
2885	WS08	Tanacetum_sinaicum	19
2886	WS08	Echinops_glaberrimus	8
2887	WS08	Polygala_sinaica	1
2888	WS08	Chiliadenus_montanus	10
2889	WS08	Matthiola_longipetala	1
2890	WSG01	Echinops_glaberrimus	5
2891	WSG01	Fagonia_mollis	41

2892	WSG01	Hyoscyamus_muticus	1
2893	WSG01	Matthiola_longipetala	21
2894	WSG01	Reseda_muricata	12
2895	WSG01	Alkanna_orientalis	3
2896	WSG01	Seraphidium_herbaalba	7
2897	WSG01	Launaea_spinosa	1
2898	WSG01	Anarrhinum_pubescens	1
2899	WSG01	Fagonia_arabica	4
2900	WSG01	Ephedra_alata	1
2901	WSG01	Stachys_aegyptiaca	2
2902	WSG01	Phlomis_aurea	1
2903	WSG01	Caylusea_hexagyna	1
2904	WSG01	Achillea_fragrantissima	1
2905	WSG02	Zilla_spinosa	7
2906	WSG02	Achillea_fragrantissima	11
2907	WSG02	Origanum_syriacum	3
2908	WSG02	Stachys_aegyptiaca	9
2909	WSG02	Caylusea_hexagyna	6
2910	WSG02	Verbascum_sinaiticum	3
2911	WSG02	Alkanna_orientalis	7
2912	WSG02	Pulicaria_undulata	3
2913	WSG02	Tanacetum_sinaicum	1
2914	WSG02	Phlomis_aurea	1
2915	WSG02	Seraphidium_herbaalba	1
2916	WSG02	Ficus_palmata	1
2917	WSG02	Fagonia_mollis	2
2918	WSG02	Fagonia_arabica	2
2919	WSG03	Zilla_spinosa	15
2920	WSG03	Fagonia_mollis	8
2921	WSG03	Echinops_glaberrimus	3
2922	WSG03	Chiliadenus_montanus	6
2923	WSG03	Origanum_syriacum	10
2924	WSG03	Launaea_spinosa	1
2925	WSG03	Mentha_longifolia	10
2926	WSG03	Fagonia_arabica	6
2927	WSG03	Gymnocarpus_decandrum	4
2928	WSG03	Conyza_bovei	1
2929	WSG03	Achillea_fragrantissima	3
2930	WSG03	Stachys_aegyptiaca	1
2931	WSG03	Capparis_spinosa	1
2932	WSG03	Alkanna_orientalis	5
2933	WSG03	Ficus_palmata	2
2934	WSG03	Juncus_rigidus	1
2935	WSG03	Ballota_undulata	1
2936	WSG03	Verbascum_sinaiticum	1
2937	WSG04	Ficus_palmata	2
2938	WSG04	Achillea_fragrantissima	11
2939	WSG04	Launaea_spinosa	2
2940	WSG04	Alkanna_orientalis	4
2941	WSG04	Fagonia_mollis	6

2942	WSG04	Zilla_spinosa	15
2943	WSG04	Echinops_spinosus	1
2944	WSG04	Echinops_glaberrimus	1
2945	WSG04	Silene_linearis	1
2946	WSG04	Retama_raetam	1
2947	WSG04	Diplotaxis_harra	2
2948	WSG04	Stachys_aegyptiaca	4
2949	WSG04	Deverra_tortuosa	1
2950	WSG04	Verbascum_decaisneanum	1
2951	WSG04	Gymnocarpus_decandrum	1
2952	WSG05	Phlomis_aurea	5
2953	WSG05	Teucrium_polium	41
2954	WSG05	Alkanna_orientalis	38
2955	WSG05	Origanum_syriacum	12
2956	WSG05	Echinops_glaberrimus	21
2957	WSG05	Stipa_parviflora	3
2958	WSG05	Diplotaxis_harra	17
2959	WSG05	Galium_setaceum	17
2960	WSG05	Globularia_arabica	1
2961	WSG05	Launaea_spinosa	2
2962	WSG05	Retama_raetam	1
2963	WSG05	Seraphidium_herbaalba	5
2964	WSG05	Silene_schimperiana	3
2965	WSG05	Silene_linearis	1
2966	WSG05	Plantago_sinaica	7
2967	WSG05	Chiliadenus_montanus	7
2968	WSG05	Pterocephalus_sanctus	8
2969	WSG05	Echinops_spinosus	6
2970	WSG05	Tanacetum_sinaicum	7
2971	WSG05	Reaumuria_hirtella	1
2972	WSG05	Farsetia_aegyptia	6
2973	WSG05	Ochradenus_baccatus	2
2974	WSG05	Anarrhinum_pubescens	1
2975	WSG05	Hyoscyamus_muticus	4
2976	WSG05	Ballota_undulata	2
2977	WSG05	Achillea_fragrantissima	2
2978	WSG05	Crataegus_x_sinaica	1
2979	WSG05	Verbascum_decaisneanum	3
2980	WSG05	Capparis_spinosa	2
2981	WSG05	Zilla_spinosa	4
2982	WSG06	Achillea_fragrantissima	11
2983	WSG06	Echinops_spinosus	6
2984	WSG06	Callipeltis_cucullaris	1
2985	WSG06	Zilla_spinosa	5
2986	WSG06	Verbascum_sinaiticum	6
2987	WSG06	Origanum_syriacum	2
2988	WSG06	Pulicaria_undulata	6
2989	WSG06	Mentha_longifolia	10
2990	WSG06	Ficus_palmata	3
2991	WSG06	Conyza_bovei	1

2992	WSG06	Juncus_rigidus	3
2993	WSG06	Deverra_tortuosa	1
2994	WSG06	Pulicaria_incisa	4
2995	WSG06	Diplotaxis_harra	1
2996	WSG06	Alkanna_orientalis	1
2997	WSG06	Crataegus_x_sinaica	1
2998	WSGR01	Achillea_fragrantissima	10
2999	WSGR01	Pulicaria_arabica	3
3000	WSGR01	Mentha_longifolia	4
3001	WSGR01	Phlomis_aurea	3
3002	WSGR01	Zilla_spinosa	9
3003	WSGR01	Diplotaxis_harra	7
3004	WSGR01	Verbascum_sinaiticum	2
3005	WSGR01	Pterocephalus_sanctus	4
3006	WSGR01	Stachys_aegyptiaca	5
3007	WSGR01	Teucrium_polium	14
3008	WSGR01	Chiliadenus_montanus	29
3009	WSGR01	Deverra_tortuosa	2
3010	WSGR01	Alkanna_orientalis	2
3011	WSGR01	Plantago_sinaica	6
3012	WSGR01	Seraphidium_herbaalba	1
3013	WSGR01	Deverra_triradiata	1
3014	WSGR01	Scariola_orientalis	21
3015	WSGR01	Juncus_rigidus	3
3016	WSGR01	Rhamnus_dispermus	1
3017	WSGR01	Tanacetum_sinaicum	2
3018	WSGR01	Echinops_spinosus	1
3019	WSGR01	Crataegus_x_sinaica	1
3020	WSGR02	Origanum_syriacum	4
3021	WSGR02	Plantago_sinaica	13
3022	WSGR02	Achillea_fragrantissima	32
3023	WSGR02	Chiliadenus_montanus	6
3024	WSGR02	Pulicaria_arabica	1
3025	WSGR02	Centaurea_eryngioides	1
3026	WSGR02	Echinops_glaberrimus	1
3027	WSGR02	Mentha_longifolia	8
3028	WSGR02	Diplotaxis_harra	3
3029	WSGR02	Deverra_triradiata	2
3030	WSGR02	Phlomis_aurea	1
3031	WSGR02	Stachys_aegyptiaca	4
3032	WSGR02	Verbascum_sinaiticum	3
3033	WSGR02	Galium_setaceum	2
3034	WSGR02	Anarrhinum_pubescens	1
3035	WSGR02	Echinops_spinosus	1
3036	WSGR02	Scariola_orientalis	4
3037	WSGR02	Rosa_arabica	1
3038	WSGR02	Alkanna_orientalis	1
3039	WSGR02	Silene_schimperiana	1
3040	WSGR03	Deverra_tortuosa	3
3041	WSGR03	Pulicaria_arabica	3

3042	WSGR03	Verbascum_sinaiticum	1
3043	WSGR03	Juncus_rigidus	3
3044	WSGR03	Stachys_aegyptiaca	3
3045	WSGR03	Phlomis_aurea	4
3046	WSGR03	Mentha_longifolia	6
3047	WSGR03	Tanacetum_sinaicum	1
3048	WSGR03	Achillea_fragrantissima	19
3049	WSGR03	Pulicaria_undulata	5
3050	WSGR03	Alkanna_orientalis	5
3051	WSGR03	Chiliadenus_montanus	1
3052	WSGR03	Zilla_spinosa	3
3053	WSGR03	Ficus_palmata	1
3054	WSH01	Fagonia_mollis	140
3055	WSH01	Fagonia_bruguieri	16
3056	WSH01	Artemisia_judaica	19
3057	WSH01	Alkanna_orientalis	2
3058	WSH01	Matthiola_longipetala	4
3059	WSH01	Peganum_harmala	6
3060	WSH01	Echinops_spinosus	1
3061	WSH01	Zilla_spinosa	1
3062	WSH02	Galium_setaceum	6
3063	WSH02	Capparis_spinosa	9
3064	WSH02	Achillea_fragrantissima	15
3065	WSH02	Artemisia_judaica	2
3066	WSH02	Zilla_spinosa	2
3067	WSH02	Fagonia_mollis	12
3068	WSH02	Matthiola_longipetala	10
3069	WSH02	Fagonia_bruguieri	4
3070	WSH02	Stachys_aegyptiaca	3
3071	WSH02	Chiliadenus_montanus	19
3072	WSH02	Phlomis_aurea	7
3073	WSH02	Echinops_glaberrimus	4
3074	WSH02	Ballota_undulata	3
3075	WSH02	Origanum_syriacum	3
3076	WSH02	Centaurea_scoparia	2
3077	WSH02	Teucrium_polium	4
3078	WSH02	Verbascum_decaisneanum	1
3079	WSH02	Seraphidium_herbaalba	1
3080	WSH02	Echinops_spinosus	1
3081	WSH02	Farsetia_aegyptia	1
3082	WSH02	Tanacetum_sinaicum	1
3083	WSH02	Verbascum_sinaiticum	1
3084	WSH02	Alkanna_orientalis	1
3085	WSH03	Fagonia_mollis	264
3086	WSH03	Zilla_spinosa	24
3087	WSH03	Achillea_fragrantissima	4
3088	WSH03	Origanum_syriacum	3
3089	WSH03	Centaurea_scoparia	37
3090	WSH03	Fagonia_arabica	20
3091	WSH03	Chiliadenus_montanus	33

3092	WSH03	Stachys_aegyptiaca	3
3093	WSH03	Matthiola_longipetala	18
3094	WSH03	Seraphidium_herbaalba	4
3095	WSH03	Artemisia_judaica	3
3096	WSH03	Verbascum_sinaiticum	103
3097	WSH03	Pulicaria_undulata	68
3098	WSH03	Alkanna_orientalis	2
3099	WSH03	Anarrhinum_pubescens	7
3100	WSH03	Juncus_rigidus	14
3101	WSH03	Caylusea_hexagyna	6
3102	WSH03	Echinops_glaberrimus	1
3103	WSH03	Teucrium_polium	3
3104	WSH03	Deverra_tortuosa	2
3105	WSH03	Gomphocarpus_sinaicus	1
3106	WSH04	Alkanna_orientalis	2
3107	WSH04	Phlomis_aurea	22
3108	WSH04	Origanum_syriacum	27
3109	WSH04	Galium_setaceum	5
3110	WSH04	Plantago_sinaica	2
3111	WSH04	Echinops_spinosus	4
3112	WSH04	Ballota_undulata	8
3113	WSH04	Echinops_glaberrimus	11
3114	WSH04	Teucrium_polium	1
3115	WSH04	Hypericum_sinaicum	1
3116	WSH04	Tanacetum_sinaicum	4
3117	WSH04	Ballota_saxatilis	9
3118	WSH04	Stipa_parviflora	3
3119	WSH04	Chiliadenus_montanus	1
3120	WSH04	Mentha_longifolia	9
3121	WSH04	Ephedra_alata	1
3122	WSH05	Echinops_glaberrimus	28
3123	WSH05	Chiliadenus_montanus	2
3124	WSH05	Teucrium_polium	5
3125	WSH05	Achillea_fragrantissima	13
3126	WSH05	Diplotaxis_harra	18
3127	WSH05	Seraphidium_herbaalba	1
3128	WSH05	Origanum_syriacum	5
3129	WSH05	Phlomis_aurea	4
3130	WSH05	Callipeltis_cucullaris	4
3131	WSH05	Tanacetum_sinaicum	7
3132	WSH05	Echinops_spinosus	1
3133	WSH05	Matthiola_longipetala	2
3134	WSH05	Stipa_parviflora	1
3135	WSH05	Plantago_sinaica	1
3136	WSH05	Alkanna_orientalis	2
3137	WSH05	Deverra_tortuosa	1
3138	WSH05	Anarrhinum_pubescens	12
3139	WSH05	Ballota_undulata	4
3140	WSH05	Stachys_aegyptiaca	4
3141	WSH05	Reseda_muricata	1

3142	WSH05	Diplotaxis_harra	1
3143	WSH06	Teucrium_polium	22
3144	WSH06	Tanacetum_sinaicum	41
3145	WSH06	Phlomis_aurea	16
3146	WSH06	Ballota_undulata	5
3147	WSH06	Ballota_saxatilis	1
3148	WSH06	Seraphidium_herbaalba	36
3149	WSH06	Zilla_spinosa	3
3150	WSH06	Diplotaxis_harra	13
3151	WSH06	Chiliadenus_montanus	1
3152	WSH06	Echinops_glaberrimus	9
3153	WSH06	Echinops_spinosus	2
3154	WSH06	Plantago_sinaica	1
3155	WSH06	Origanum_syriacum	3
3156	WSH07	Tanacetum_sinaicum	44
3157	WSH07	Teucrium_polium	5
3158	WSH07	Echinops_glaberrimus	34
3159	WSH07	Ballota_undulata	9
3160	WSH07	Zilla_spinosa	4
3161	WSH07	Alkanna_orientalis	2
3162	WSH07	Diplotaxis_harra	5
3163	WSH07	Matthiola_longipetala	2
3164	WSH07	Phlomis_aurea	1
3165	WSH07	Globularia_arabica	2
3166	WSH08	Phlomis_aurea	39
3167	WSH08	Teucrium_polium	12
3168	WSH08	Tanacetum_sinaicum	23
3169	WSH08	Echinops_glaberrimus	25
3170	WSH08	Chiliadenus_montanus	7
3171	WSH08	Ballota_undulata	3
3172	WSH08	Ballota_saxatilis	2
3173	WSH08	Plantago_sinaica	1
3174	WSH08	Origanum_syriacum	2
3175	WSH08	Matthiola_longipetala	1
3176	WSH08	Stipa_parviflora	1
3177	WSH09	Ballota_undulata	3
3178	WSH09	Echinops_glaberrimus	33
3179	WSH09	Seraphidium_herbaalba	10
3180	WSH09	Teucrium_polium	9
3181	WSH09	Phlomis_aurea	9
3182	WSH09	Deverra_tortuosa	1
3183	WSH09	Tanacetum_sinaicum	16
3184	WSH09	Globularia_arabica	2
3185	WSH09	Anarrhinum_pubescens	1
3186	WSH09	Chiliadenus_montanus	2
3187	WSH09	Matthiola_longipetala	5
3188	WT01	Fagonia_mollis	65
3189	WT01	Matthiola_longipetala	33
3190	WT01	Farsetia_aegyptia	5
3191	WT01	Seraphidium_herbaalba	42

3192	WT01	Reseda_muricata	1
3193	WT01	Chiliadenus_montanus	4
3194	WT01	Astragalus_spinosus	1
3195	WT01	Capparis_spinosa	1
3196	WT02	Farsetia_aegyptia	2
3197	WT02	Fagonia_mollis	146
3198	WT02	Seraphidium_herbaalba	19
3199	WT02	Diplotaxis_harra	30
3200	WT02	Matthiola_longipetala	5
3201	WT02	Zilla_spinosa	1
3202	WT02	Gymnocarpus_decandrum	4
3203	WT02	Chiliadenus_montanus	1
3204	WT03	Lavandula_pubescens	4
3205	WT03	Fagonia_mollis	38
3206	WT03	Matthiola_longipetala	2
3207	WT03	Diplotaxis_harra	6
3208	WT03	Callipeltis_cucullaris	1
3209	WT03	Teucrium_polium	1
3210	WT03	Silene_schimperiana	6
3211	WT03	Ochradenus_baccatus	1
3212	WT03	Reseda_muricata	5
3213	WT03	Fagonia_arabica	4
3214	WT03	Phlomis_aurea	2
3215	WT03	Stachys_aegyptiaca	4
3216	WT03	Alkanna_orientalis	4
3217	WT03	Anarrhinum_pubescens	1
3218	WT03	Echinops_glaberrimus	3
3219	WT03	Zilla_spinosa	5
3220	WT03	Verbascum_decaisneanum	1
3221	WT03	Seraphidium_herbaalba	3
3222	WT03	Origanum_syriacum	1
3223	WT04	Diplotaxis_harra	87
3224	WT04	Anarrhinum_pubescens	12
3225	WT04	Echinops_glaberrimus	16
3226	WT04	Chiliadenus_montanus	3
3227	WT04	Ballota_undulata	7
3228	WT04	Teucrium_polium	10
3229	WT04	Tanacetum_sinaicum	8
3230	WT04	Reseda_muricata	1
3231	WT04	Seraphidium_herbaalba	17
3232	WT04	Colutea_istria	2
3233	WT04	Phlomis_aurea	1
3234	WT05	Diplotaxis_harra	25
3235	WT05	Fagonia_mollis	57
3236	WT05	Reseda_muricata	4
3237	WT05	Chiliadenus_montanus	1
3238	WT05	Seraphidium_herbaalba	12
3239	WT05	Lycium_shawii	6
3240	WT05	Deverra_tortuosa	3
3241	WT05	Stachys_aegyptiaca	6

3242	WT05	Echinops_glaberrimus	2
3243	WT05	Zilla_spinosa	4
3244	WT05	Origanum_syriacum	1
3245	WT05	Tanacetum_sinaicum	1
3246	WT05	Ballota_undulata	1
3247	WT05	Alkanna_orientalis	4
3248	WT06	Alkanna_orientalis	5
3249	WT06	Teucrium_polium	10
3250	WT06	Echinops_glaberrimus	10
3251	WT06	Origanum_syriacum	10
3252	WT06	Stipa_parviflora	1
3253	WT06	Deverra_tortuosa	4
3254	WT06	Tanacetum_sinaicum	13
3255	WT06	Phlomis_aurea	3
3256	WT06	Pterocephalus_sanctus	3
3257	WT06	Stachys_aegyptiaca	1
3258	WT06	Seraphidium_herbaalba	11
3259	WT06	Ballota_undulata	2
3260	WT06	Crataegus_x_sinaica	2
3261	WT06	Mentha_longifolia	2
3262	WT06	Juncus_rigidus	5
3263	WT06	Plantago_sinaica	1
3264	WT06	Zilla_spinosa	1
3265	WT06	Diplotaxis_harra	2
3266	WT07	Tanacetum_sinaicum	22
3267	WT07	Matthiola_longipetala	2
3268	WT07	Phlomis_aurea	10
3269	WT07	Echinops_glaberrimus	7
3270	WT07	Seraphidium_herbaalba	14
3271	WT07	Stipa_parviflora	3
3272	WT07	Cotoneaster_orbicularis	1
3273	WT07	Origanum_syriacum	10
3274	WT07	Plantago_sinaica	6
3275	WT07	Stachys_aegyptiaca	3
3276	WT07	Pterocephalus_sanctus	2
3277	WT07	Teucrium_polium	6
3278	WT07	Silene_linearis	1
3279	WT07	Anarrhinum_pubescens	1
3280	WT07	Deverra_tortuosa	3
3281	WT07	Chiliadenus_montanus	1
3282	WT07	Ballota_undulata	1
3283	WT07	Juncus_rigidus	1
3284	WT07	Diplotaxis_harra	8
3285	WT08	Silene_schimperiana	8
3286	WT08	Anarrhinum_pubescens	7
3287	WT08	Teucrium_polium	34
3288	WT08	Seraphidium_herbaalba	8
3289	WT08	Tanacetum_sinaicum	48
3290	WT08	Diplotaxis_harra	26
3291	WT08	Plantago_sinaica	23

3292	WT08	Pterocephalus_sanctus	8
3293	WT08	Cotoneaster_orbicularis	11
3294	WT08	Phlomis_aurea	6
3295	WT08	Chiliadenus_montanus	6
3296	WT08	Echinops_glaberrimus	6
3297	WT101	Fagonia_mollis	60
3298	WT101	Chiliadenus_montanus	20
3299	WT101	Teucrium_polium	3
3300	WT101	Matthiola_longipetala	19
3301	WT101	Fagonia_arabica	2
3302	WT101	Achillea_fragrantissima	1
3303	WT101	Farsetia_aegyptia	2
3304	WT101	Echinops_glaberrimus	3
3305	WT101	Seraphidium_herbaalba	1
3306	WT101	Gomphocarpus_sinaicus	2
3307	WT101	Origanum_syriacum	1
3308	WT101	Ballota_undulata	2
3309	WT101	Centaurea_scoparia	2
3310	WT102	Fagonia_mollis	9
3311	WT102	Alkanna_orientalis	2
3312	WT102	Seraphidium_herbaalba	35
3313	WT102	Echinops_glaberrimus	3
3314	WT102	Matthiola_longipetala	13
3315	WT102	Gymnocarpus_decandrum	1
3316	WT102	Zilla_spinosa	1
3317	WT102	Chiliadenus_montanus	1
3318	WT102	Teucrium_polium	1
3319	WT102	Centaurea_scoparia	3
3320	WT102	Anarrhinum_pubescens	1
3321	WT102	Farsetia_aegyptia	1
3322	WT103	Echinops_spinosus	16
3323	WT103	Origanum_syriacum	13
3324	WT103	Chiliadenus_montanus	1
3325	WT103	Phlomis_aurea	4
3326	WT103	Diplotaxis_harra	17
3327	WT103	Ballota_undulata	4
3328	WT103	Seraphidium_herbaalba	6
3329	WT103	Echinops_glaberrimus	5
3330	WT103	Iphiona_mucronata	1
3331	WT103	Plantago_sinaica	2
3332	WT103	Tanacetum_sinaicum	1
3333	WT103	Anarrhinum_pubescens	2
3334	WT103	Silene_schimperiana	1
3335	WT104	Seraphidium_herbaalba	17
3336	WT104	Diplotaxis_harra	12
3337	WT104	Chiliadenus_montanus	20
3338	WT104	Tanacetum_sinaicum	6
3339	WT104	Echinops_glaberrimus	9
3340	WT104	Verbascum_decaisneanum	1
3341	WT104	Galium_setaceum	1

3342	WT104	Plantago_sinaica	7
3343	WT104	Ballota_undulata	4
3344	WT104	Gymnocarpus_decandrum	1
3345	WT104	Phlomis_aurea	1
3346	WT104	Anarrhinum_pubescens	3
3347	WT104	Pterocephalus_sanctus	1
3348	WT105	Diplotaxis_harra	12
3349	WT105	Teucrium_polium	16
3350	WT105	Tanacetum_sinaicum	22
3351	WT105	Chiliadenus_montanus	7
3352	WT105	Deverra_tortuosa	2
3353	WT105	Plantago_sinaica	14
3354	WT105	Echinops_glaberrimus	4
3355	WT105	Pterocephalus_sanctus	3
3356	WT105	Origanum_syriacum	5
3357	WT105	Silene_linearis	3
3358	WT105	Phlomis_aurea	5
3359	WT105	Stipa_parviflora	1
3360	WT105	Cotoneaster_orbicularis	2
3361	WT105	Stachys_aegyptiaca	1
3362	WT105	Silene_schimperiana	2
3363	WT105	Seraphidium_herbaalba	1
3364	WT105	Galium_setaceum	3
3365	WT105	Nepeta_septemcrenata	3
3366	WT106	Galium_setaceum	3
3367	WT106	Diplotaxis_harra	16
3368	WT106	Centaurea_scoparia	10
3369	WT106	Iphiona_mucronata	5
3370	WT106	Stachys_aegyptiaca	7
3371	WT106	Deverra_tortuosa	3
3372	WT106	Tanacetum_sinaicum	6
3373	WT106	Echinops_spinosus	1
3374	WT106	Echinops_glaberrimus	3
3375	WT106	Farsetia_aegyptia	1
3376	WT106	Seraphidium_herbaalba	10
3377	WT106	Gymnocarpus_decandrum	5
3378	WT106	Plantago_sinaica	1
3379	WT106	Fagonia_arabica	1
3380	WT106	Chiliadenus_montanus	8
3381	WT106	Phlomis_aurea	2
3382	WT106	Ballota_undulata	1
3383	WT106	Verbascum_decaisneanum	1
3384	WTF01	Zilla_spinosa	6
3385	WTF01	Fagonia_mollis	24
3386	WTF01	Gymnocarpus_decandrum	5
3387	WTF01	Chiliadenus_montanus	2
3388	WTF01	Seraphidium_herbaalba	2
3389	WTF01	Alkanna_orientalis	5
3390	WTF01	Pulicaria_undulata	12
3391	WTF01	Hyoscyamus_muticus	2

3392	WTF01	Teucrium_polium	1
3393	WTF01	Matthiola_longipetala	11
3394	WTF01	Echinops_glaberrimus	1
3395	WTF01	Plantago_sinaica	1
3396	WTF01	Juncus_rigidus	23
3397	WTF01	Citrullus_colocynthis	1
3398	WTF01	Verbascum_sinaiticum	10
3399	WTF01	Stachys_aegyptiaca	1
3400	WTF01	Lavandula_pubescens	1
3401	WTF01	Mentha_longifolia	22
3402	WTF01	Echinops_spinosus	1
3403	WTF01	Pulicaria_incisa	1
3404	WTF02	Zilla_spinosa	7
3405	WTF02	Fagonia_mollis	24
3406	WTF02	Hyoscyamus_muticus	7
3407	WTF02	Farsetia_aegyptia	7
3408	WTF02	Fagonia_arabica	2
3409	WTF02	Caylusea_hexagyna	2
3410	WTF02	Ballota_undulata	1
3411	WTF02	Retama_raetam	1
3412	WTF02	Phlomis_aurea	1
3413	WTF02	Ochradenus_baccatus	1
3414	WTF02	Centaurea_scoparia	1
3415	WTF02	Gymnocarpus_decandrum	1
3416	WTF02	Blepharis_ciliaris	3
3417	WTF03	Matthiola_longipetala	4
3418	WTF03	Seraphidium_herbaalba	15
3419	WTF03	Diplotaxis_harra	3
3420	WTF03	Echinops_glaberrimus	7
3421	WTF03	Centaurea_scoparia	2
3422	WTF03	Ballota_undulata	1
3423	WTF03	Zilla_spinosa	6
3424	WTF03	Caylusea_hexagyna	1
3425	WTF03	Ficus_palmata	1
3426	WTF03	Gymnocarpus_decandrum	1
3427	WTF03	Hyoscyamus_muticus	5
3428	WTF03	Origanum_syriacum	1
3429	WTF03	Silene_linearis	1
3430	WTF03	Fagonia_arabica	1
3431	WTF04	Gymnocarpus_decandrum	12
3432	WTF04	Diplotaxis_harra	47
3433	WTF04	Silene_linearis	2
3434	WTF04	Reaumuria_hirtella	18
3435	WTF04	Iphiona_scabra	1
3436	WTF05	Zilla_spinosa	7
3437	WTF05	Seraphidium_herbaalba	5
3438	WTF05	Diplotaxis_harra	31
3439	WTF05	Launaea_spinosa	7
3440	WTF05	Pistacia_khinjuk	2
3441	WTF05	Tanacetum_sinaicum	8

3442	WTF05	Phlomis_aurea	1
3443	WTF05	Ephedra_alata	4
3444	WTF05	Silene_linearis	4
3445	WTF05	Ballota_undulata	1
3446	WTF05	Echinops_glaberrimus	2
3447	WTF05	Centaurea_scoparia	1
3448	WTF06	Tanacetum_sinaicum	11
3449	WTF06	Globularia_arabica	1
3450	WTF06	Echinops_glaberrimus	16
3451	WTF06	Ballota_undulata	3
3452	WTF06	Ephedra_alata	3
3453	WTF06	Retama_raetam	2
3454	WTF06	Silene_linearis	3
3455	WTF06	Farsetia_aegyptia	1
3456	WTF06	Phlomis_aurea	3
3457	WTF06	Alkanna_orientalis	1
3458	WTF06	Pterocephalus_sanctus	1
3459	WTF06	Centaurea_scoparia	1