

Analyzing the Consistency of Flower Preference Among Generalist Pollinators in Montane Meadows of the Oregon Cascades

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Abstract:

The major focus of this research was to determine if generalist pollinators had an order of preference in which they visited flowers. Flower proportions for each of twelve meadows were compared against the interaction frequencies for five individual pollinators in each meadow, and the proportions were found to be significantly different. Preferences were then quantified by dividing the interaction frequencies by the flower proportions to create a “preference score” for each plant-pollinator relationship. From here the focus narrowed to one pollinator, *Apis mellifera*, and similarities of flower rankings were conducted pairwise across meadows using Spearman correlations, which were then weighted based on the number of interactions across the meadow pair. While the correlations on average were close to zero, higher correlations tended to be associated with higher interactions. Thus, preference lists are likely more consistent when there are enough total interactions for a true ranking to materialize.

Introduction

Pollinators can be divided up into two main varieties: specialists and generalists. Specialist pollinators are unique in that they will only visit select flower species; their interactions are exclusive to these flowers, and they will not visit any other species of flower even if more are available in the area (Moldenke, 2017). However, this group is fairly small; the vast majority of pollinators can be described as generalists. These types of pollinators are not exclusive towards any flowers; they can visit a wide range of different plant species. In fact, they will visit practically any flower which they are physically capable of entering. However, it is unclear whether generalist pollinator visitation among meadow flowers is truly random, or whether there is some sort of pattern to their interactions. Studies have shown that models where traits of plants and pollinators are factored in produce a better representation of pollinator flower visits than a truly random model does (Kumaran 36). There are also some limiting factors which can prevent a certain pollinator from visiting a flower, such as a flower having a deep tube, but a pollinator having a very short tongue (Thomas 1-2). In this case, the pollinator cannot access the pollen and nectar inside, and thus is unlikely to return to the flower given the lack of reward. These limiting factors may be discouraging pollinators from making visits to certain flowers. So, it is possible, and probably very likely, that certain traits of plants and pollinators are influencing the decisions of the generalist pollinators, which may make their visitation distribution more than purely random (Thomas 1). Models created to attempt to understand why pollinators may visit certain flowers more often than others have failed to explain why it happens, and many factors of the plant-pollinator interactions are left unaccounted for (Kumaran 36).

However, if pollinators do visit certain flowers more often than others, it could be possible to construct a list of flowers according to preference by a pollinator. This “preference list” would serve as a ranking of flower visitation by generalist pollinators which could be used to describe and explain its behavior. Thus far, no such lists have ever been created. However, if pollinator preference could be discovered, it could have great implications towards learning more about these species. Since many pollinators have been seeing declining populations over recent years, knowing which flowers pollinators desire most could help in recreating their habitats or in knowing which areas contain a dense population of a certain species, and thus must remain protected.

The primary focus of this study was to attempt to find the preference rankings for select generalist pollinators, and explain the interaction distribution with these lists. The main question this

project sought to answer was: "How are flower preferences related to flower abundances for generalist pollinators?" The overall objective was to find lists for all meadows used in our field research, and eventually compile a complete list of preferences certain common pollinators had in general for the meadows. Another challenge to look at is whether pollinator preference is consistent across meadows. If pollinators do in fact have a complete ordering of flower favoritism, then it should present itself across meadows by having similar rankings of flowers regardless of the location of the vector. However, if there is not one consistent listing, then preference lists may differ across meadows, and it may not be possible to compile a complete listing of flower preferences for pollinators. Additionally, we must also examine other factors which could be influencing pollinator preferences. The rankings could depend on how frequently a certain pollinator visits a meadow, since fewer interactions results in less data being available to work with, which may hide patterns present in the data. Distances between meadows, and which plants they share in common, may be some other factors which could potentially determine pollinator preference. Different meadows will have different plants growing inside, so having a differing amount of plants available will certainly change the way in which flowers are ranked by preference. However, if preference is consistent across meadows, then the overall order of ranking will remain sufficiently consistent, since pollinators will still visit some flowers more than others if they are available. It is not likely possible to provide a good estimate of pollinator preference based solely on plant and pollinator traits (Kumaran 36). However, if there is a concrete preference list for some types of pollinators, it may be possible to examine the traits of the most consistently popular flowers and try to explain why these flowers are favored the most. If preference lists do arise and remain sufficiently consistent across meadows, then this is strong evidence that generalist pollinators, though not as exclusive as specialist pollinators, still have flowers they would much rather visit if available as opposed to other, less popular flowers available in a meadow. This would also provide strong evidence against a random visitation by pollinators to plants in a meadow.

Methods

Field site

All field work was conducted at the H. J. Andrews Experimental Forest, a 62 square-kilometer research forest sponsored by Oregon State University near Blue River, OR (Jones 5). The climate of the forest is marine temperate, which means that winters are wet and summers are warm and dry, with less than twenty percent of annual precipitation falling between May and October (Jones 5). The focus of our study was at montane meadows, which comprise less than five percent of the total area of the forest (Jones 5). Our study was focused on three complexes of meadows, each containing four individual meadows. The Lookout complex contained meadows Main, Bog, Outcrop, and Steep, the Carpenter complex contained meadows Main, Saddle, Basin, and Ridge, and the Frissell complex contained Meadow 2, Northern Exposure, Roswell Peak 1, and Roswell Peak 2. Data for most meadows has been collected since 2011, except for Lookout Steep, Lookout Bog, and Northern Exposure, which started in 2012. Each meadow was divided up into ten three meter by three meter plots.

Field Methods

Each day out in the field we would bring a timer, a bag of empty vials, nets, and some jars filled with 1/8" of ammonium carbonate for use in conducting the study. The field work was divided into two major parts: an anthesis count and interaction survey. For the anthesis count, all flowers growing inside the plot deemed to be in bloom by the observer were counted for each meadow. These were recorded

as stalks in bloom. Next, we counted the number of flowers per stalk for up to ten stalks, and obtained an average for each plant species. The second part of the field work involved an interaction survey. Upon completion of the anthesis survey, we would monitor the plots for fifteen minutes and keep watch for every interaction we saw. These were recorded by minute for each plant-pollinator interaction witnessed. In addition, the weather, wind, temperature, and activity were recorded for each survey completed. If an insect could not be identified out in the field, we would use either an empty vial or a net to capture the insect for a closer look. If it was still unable to be determined, we would transfer it to the jar of ammonium carbonate to terminate the specimen for later identification.

Mathematical/statistical analysis

To begin, I uploaded CSV files of both the anthesis information, as well as the interaction information, into R. I used data collected from 2011-2015, specifically combining the 2011-2014 and 2015 data into one file for the purposes of having one upload for both anthesis and interactions. I did not use the most recent 2017 data due to lack of proper cleaning, which renders this data not yet suitable for reliable analysis. 2016's data was also not quite consistent with previous years' data, so this year was eliminated as well. Thus, the data used for this analysis was from 2011-2015. Once loaded, all blank or "NA" data points were eliminated, leaving behind only complete data to work with. Then, I divided up the anthesis data by meadow so that twelve tables were created from the master anthesis data, each table containing flower data for one individual meadow. Then, I went to the interactions sheet and isolated interactions by one of five pollinators chosen to be the focus of this project. The pollinators used were: *Apis mellifera*, *Bombus mixtus*, *Bombylius major*, *Epicauta puncticollis*, and *Eristalis hirtus*. These pollinators were some of the most common ones seen at the H. J. Andrews Experimental Forest, and thus contained the most useful information for a thorough analysis. The pollinator interaction tables were also broken up by meadow. Then, I calculated the total count of each flower species for every meadow, and counted the total interactions with each unique flower for the pollinator data. These were combined into the same table for comparison. To allow for proper comparison, these frequency values were transformed into proportions by dividing flower abundance by the total number of flowers in the meadow, and interaction frequency by the total number of interactions of the pollinator in the meadow. This then allowed for direct comparison of the two values to see how flower proportion differed from interaction proportion.

Since it was clear that the two values differed greatly for all pollinators in most meadows, it was decided that a "preference list" should be created in order to get a visualization as to which flowers each pollinator visited more or less frequently than expected. To do this, I quantified preference as a ratio between the observed proportions and expected proportions. The observed proportions, which were the interaction frequencies, were divided by the expected proportions, which were the flower abundances. This then created a "Preference Score" which rated how much more or less often a pollinator visited a flower than it was expected to, given the abundance of flowers in the meadow. A score over one indicated that a pollinator visited the flower more often than expected, while a score less than one indicated a pollinator visited a flower less often than expected. A score of zero meant that a flower was in a meadow, but was never visited by the vector in question. Lists were created for all five pollinators in all twelve meadows.

When the lists were observed, it became clear that some of the same flowers were constantly near the top or bottom of some of the lists. However, not all lists were in a similar order, and many

flowers would be present in one meadow, but not in several others. To obtain a proper picture of whether preference varied over meadows or if it remained similar over common flowers, Spearman correlations were calculated pairwise over all meadows for a total of sixty-six correlation calculations. Plants were restricted to only the common ones shared between two meadows, and commonly-pollinated plants' preference rank were compared between the two meadows. All comparisons were calculated in R, and a Spearman correlation for each meadow pair was obtained. If a meadow had no commonly pollinated plants with another, the correlation was recorded as "NA". For this and the remaining analysis, the focus was narrowed to just *Apis mellifera*, by far the most common pollinator in the H. J. Andrews Experimental Forest over the period of 2011-2015.

To conduct further analysis into the correlations, I decided to weight the correlations based on the frequency of interactions which occurred on common plants between two meadows. The total number of interactions with the common plants was calculated for all meadow pairs, then the values were standardized by dividing each interaction total by the greatest number of interactions. The unweighted Spearman correlation multiplied this to obtain a weighted correlation that would be between -1 and 1. The number of plants in both meadows, as well as common plants, was also calculated for each meadow pair. The number of interactions was then compared for both the unweighted and weighted Spearman correlations.

Lastly, as a final analysis into the correlations, I obtained data on the distance between each meadow pair. This was graphed against the weighted Spearman correlations as a search to see if a correlation was present between meadow distance and the similarity of the preference lists between the two meadows.

Results

Figure 1 displays the relationship between flower proportions and interaction proportions for *Apis mellifera* for the period of 2011-2015. Assuming a linear relationship, we would expect that if flower proportion matched interaction proportion, the scatterplot would resemble a linear, straight-line relationship in which flower abundance roughly equaled interaction frequency throughout all meadows for all plants. However, as we can see in Figure 1, this is clearly not the case. The data more accurately forms a cloud, with the vast majority of the data clustered near the x-axis or the y-axis. The data structure is so cloudy that virtually no linear relationship can be seen at all. In fact, no patterns are clearly visible from observing this plot. Almost no data points are on the hypothetical line where flower proportion equals interaction proportion, which would run diagonally through the plot as the line $y=x$. We can see that some extreme outliers exist, where flower proportion is very low, yet interaction proportion is quite high, resulting on these points being near the top quite close to the y-axis. Many other points have high flower proportions, yet receive almost no flower visits from *Apis mellifera*, and so are far to the right along the x-axis. Most points are rather close to either axis, yet there are still some which are nearer to the center of the graph. Still, as we can see, nothing is particularly close to the line of symmetry which would indicate an equality between flower proportion and interaction proportion. A similar trend presents itself with the other four species of pollinators observed.

Narrowing our focus to Carpenter Main, we look at Table 2 and notice the wide variety of preference scores given for *Apis mellifera* at this meadow. If the flower proportions matched up with the interaction proportions, the scores would all be fairly close to one. However, we can see that this is not the case, as only the plant *Rumex acetosella* has a score (.93) which is anywhere close to one. Most

scores are at or close to zero, with a few scores that reach high values. For this meadow and pollinator, the most popular flowers are *Eriophyllum lanatum*, with a score of 32.987, and *Erigeron aliceae & foliosus*, with a score of 30.701. These scores indicate that these flowers were visited significantly more by *Apis mellifera* than would be expected. In Figure 2, we can see the three most popular plants; the aforementioned top two plus *Solidago canadensis*, are located near the y-axis but are in the upper portion of the graph. This is a significant departure from the linear line which would connect flower abundance with interaction frequency, showing that despite few occurrences of these flowers, they make up the majority of *Apis mellifera*'s interactions at this meadow. The graph has a very similar structure to Figure 1 in that most data points are clustered near the axes. Likewise, we can see that some flowers make up a large portion the meadow, but a very small part of the interaction distribution. For instance, in Table 2, we notice that *Achillea millefolium* makes up almost eight percent of Carpenter Main, but is less than one percent (0.25%) of *Apis mellifera*'s interactions. Thus, its score is a low .032, indicating that it is an abundant flower, but is relatively ignored by the pollinator. Similar patterns emerge for the remaining meadows for *Apis mellifera* as well as the other pollinators.

One of the problems with the preference score rankings is that they are on a widely varying scale. Some of the top plants had preference scores as high as 163, while others have scores down to .001 or lower, if not zero. Another frequent occurrence is the reappearance of certain flowers near the top of many of the preference lists. For instance, *Apis mellifera* tended to visit *Gilia capitata*, *Eriophyllum lanatum*, and *Erigeron aliceae & foliosus* much more frequently than other flowers. The Spearman Correlations for *Apis mellifera* in Table 2 demonstrate the scores which came up after the calculations. The values range from a high of .634 between RP1 and CPB to a low of -.864 between CPB and LB. Eleven meadow pairs were excluded because one meadow had zero shared common flowers pollinated in both meadows. Ten of these meadows involved Carpenter Ridge because the only flower pollinated by *Apis mellifera* was *Sedum oreganum*, which was only present there and in Carpenter Saddle. Looking at the graph of the ranges of correlations shown in Figure 3, we can see that most of the correlations are fairly close to zero. In fact, 25 of 55 correlations fall within .25 of a zero correlation, which is close to half of all the pairs. The graph is roughly normal with a slight right skew, and is centered around a correlation of zero. The average correlation is 0.09, which is very close to zero. So, it seems that the average meadow pair will have a Spearman correlation that is almost zero.

However, the Spearman calculations from above did not factor in the number of interactions involved with the meadow pairs, and this could be a very important distinction to ignore. Viewing a scatterplot of number of interactions versus the Spearman correlations in Figure 4, we can see that there exists a polynomial trend with an R-squared value of .44. Most of the negative correlations are clustered near the lower number of total interactions, while the higher numbers of interactions tend to yield higher correlations. Table 3 shows how the correlations were weighted based on the total number of interactions seen at each plot. Though a few meadow pairs had a plethora of total interactions, the vast majority had only a small fraction of that. Thus, most of the weighted correlations are quite small and close to zero due to the low number of total interactions. The number of interactions ranged from as low as 1 total interaction for CPB-LB to a high of 14572 for M2-RP2. About two-thirds of the pairs had less than 5000 interactions, while just six had greater than 10000. Table 4 shows the weighted correlations compared with the unweighted Spearman correlations from Table 2. When we view this, we can see that most of the negative correlations have become quite small and very close to zero, while a few of the larger positive correlations still remain. This is also evident in a histogram of the weighted

correlations shown in Figure 5. Here, the distribution no longer looks normal, and in fact is quite heavily skewed to the left. Most values are still around 0, and the mean of .084 is still almost zero, but there are several outliers which prevent the data from resembling the normal curve they were as unweighted correlations. When we graph the total number of interactions versus the new weighted averages, we get an almost linear relationship between correlation and number of interactions. As the number of interactions increases, the weighted correlations increase as well. The trendline yields an R-squared value of .75, which indicates a strong association may be present.

Looking at the most highly weighted correlated pairs from Table 4, we see that they are NE-M2, M2-RP1, M2-RP2, RP1-RP2, M2-LO, M2-LS, and RP2-LS. Four of those pairs occur within the Frissell complex, so perhaps distance has something to do with the correlations. When we compare distance between meadows to their weighted correlation in Table 5, we obtain a fairly clouded graph in Figure 7. It is clear that most widely-spaced meadows are clustered around a zero correlation, and some of the closely-spaced meadows can have high correlations. However, the best regression done on this relation yields an R-squared value of .11, which indicates that, while there is some negative association between meadow distances and correlations, there are still many exceptions to the rule and no definitive conclusion can be drawn.

Finally, when we examine the most correlated meadow pairs' top flower choices for *Apis mellifera*, we can see in Table 6 that, for the most part, the most popular flowers are *Gilia capitata* and *Eriophyllum lanatum*. *Gilia capitata* is the top choice among all meadows involved in the highest correlations, and *Eriophyllum lanatum* is among the top four in all pairs. In fact, of the six plots not involved in any of the highly correlated pairs, *Gilia capitata* was absent in five of those plots. In Carpenter Saddle, the one plot it did appear in, *Gilia capitata* made up less than 0.05% of the total flowers, while it made up at least 2% of the total flower proportion in all the other meadows it appeared in. Figure 8 plots the expected versus observed proportions of *Apis mellifera*'s visits to *Gilia capitata* for all seven plots it appeared in, and the observed count was far greater than the expected count for the six plots involved in highly-correlated meadow pairs. For the outlier, Carpenter Saddle, the point was located almost on the origin.

Discussion:

One of the largest observations made during the crafting of the preference lists was the high variety in plant species present between meadows. No two meadows were composed of the same plants, and there tended to be a high variability between two meadows, especially if the meadows differed greatly in ecology. For instance, Lookout Bog was comprised of many unique species of plants such as *Boykinia major*, *Dodecatheon alpinum*, and *Mitella pentandra* which tended not to be found anywhere else in the Andrews Forest. Likewise, Carpenter Ridge had very few flowers, and thus tended not to have much overlap with the other meadows. One major consequence that could come from this is that perhaps a pollinator like *Apis mellifera* finds a rare flower at one of the meadows that has certain characteristics that the honeybee enjoys, so it ranks high on the preference list. However, if this flower is located nowhere else, it drastically changes the preference list for that meadow, making it difficult to match up well with other meadows' preference lists. Since there are numerous flowers which are not shared in common by many meadows, if this hypothetical case materializes frequently, it would mean that a pollinator's favorite flowers are not always particularly widespread, and thus it is difficult to get

an accurate ranking of pollinator preference choices if there is not enough overlap between the flowers in meadows.

In some cases, the rarity of a certain flower may limit a pollinator's ability to visit that flower frequently. It is possible that, to a certain extent, flower abundance may not truly affect a pollinator's interaction frequency. However, if the flower is rare enough, it will certainly provide some limit. At Carpenter Saddle, *Gilia capitata* was much harder to find than at other meadows, and this is the only meadow where this flower was present that was not the top choice of *Apis mellifera*. What could have happened is that *Apis mellifera* does indeed favor *Gilia capitata* over all other flowers. But, the flower was so rare at this meadow that it became impractical for *Apis mellifera* to focus its energy towards pollinating it. There may not have been enough of this flower species to sustain the pollinator, so it was forced to find other flowers to pollinate. This dropped *Gilia capitata* down very far on this preference list, and made Carpenter Saddle's list very different from other meadows' lists. This would then have had the effect of making Carpenter Saddle paired meadows' Spearman correlation very low, which added more weight in the overall distribution towards zero.

With the Spearman correlations being distributed normally centered around zero as they are, it is very possible that pollinators, particularly *Apis mellifera*, do not truly have preference lists, and will simply visit whatever flower is closest to them. If the true correlation is in fact zero, that means there is virtually no significant similarity between preference lists in meadows, and *Apis mellifera*'s interactions with flowers are either randomly based or are unable to be predicted based on the information currently available. If this is true, then it is impossible to compile a "master preference list" which will determine a concrete order in which a pollinator will value flowers to visit. Either this list does not exist or is only present on a small-scale meadow scope. Highly correlated meadows could be due to random chance, as this would be accounted for given that this is a normal distribution and there are quite few plots with significantly high correlations.

The scope of the list is another factor that needs to be taken into account when explaining the relatively low Spearman correlations. As mentioned earlier, there are about two or three flowers which were constantly high on the lists of *Apis mellifera* across several meadows. It could be the case that the vector truly does prefer these flowers over all others. However, due to the vast quantity of flowers being compared, and the high percentage of them with preference scores at or close to zero, this noise could have hidden any true favoritism *Apis mellifera* had been showing towards these flower species. This could also be because no pollinator has a rigid, concrete ranking of every flower they visit. It would be quite improbable if they did have a strict list. However, they may have a few species of flower that they strongly prefer and will visit if available, but since this analysis was attempting to find a master list, any smaller-scale preference ranking which did exist has been masked by the lack of a solid ranking between a multitude of species.

The total number of interactions which occurred between *Apis mellifera* and flowers in a meadow is another limiting factor which restricts conclusions that can be drawn from this study. In some meadows such as Meadow 2, interactions were plentiful, and there is a large amount of data from which to draw conclusions. However, at other meadows such as Carpenter Ridge and Carpenter Saddle, there are far fewer data points with which to work with. With less data arises the chance for outliers to have a much larger impact. Say a pollinator does not visit a meadow very often, either because the environment is poor or it simply does not live nearby to merit heavy visitation. Suppose there is a rare

flower in this plot which makes up a tiny portion of the meadow. The pollinator does not visit the meadow very often, but visits the rare flower quite frequently. Due to this, the preference score will become very inflated since the pollinator visited it much more frequently than it was expected to. However, since the pollinator did not visit the meadow very often, the score becomes drastically inflated, and the preference list is changed dramatically as a result. Conversely, the opposite effect happens if a pollinator again does not make many interactions in a meadow, and rarely visits a common flower in the plot. Then, this flower receives a very low preference score when it might have received a more average one at a place with more pollinator visits, and the preference list is again changed dramatically.

This was the major driving factor behind attempting to weight the scores based on total pollinator interactions between common flowers in a meadow. Once done, a decently fitted linear relationship was crafted relating interactions to weighted correlation, and the tendency was that the most correlated meadow pairs also had a high number of interactions. Thus, it could be the case that there is a rough preference list for pollinators, but it only reveals itself if there are plentiful interactions. If there are too few interactions, then it is possible that there is not enough data for the preference list to manifest itself, and so remains hidden. Another piece of evidence to back this up is that negatively correlated plots all tended to have very few interactions happening within them, and thus were sent to almost zero once weighted. Thus, it is possible that if the correlations were run only on meadow pairs with high numbers of interactions, the correlations would have been, on average, significantly different from zero, and the preference lists would have manifested themselves.

Finally, there may possibly be an association with distance between meadows and the weighted correlations for the pairs. The general trend appears to be that greatly-spaced pairs tended to have low correlations, while high correlations were associated with low-spaced pairs. Indeed, four of the six possible pairings within the Frissell complex had significantly high weighted correlations (greater than .3). However, this is the only complex where this relationship was present, as there were no strong correlations within meadows in the Lookout or Carpenter complexes. While distance may partially explain the correlations between meadows, it certainly cannot provide a complete or universal explanation for the difference in preference lists between meadows. It could be that meadows located at the Frissell complex have similar flowers just by chance. Additionally, the meadows at Frissell are located very close together, closer than any of the other complexes, which could explain why the distance theory works for Frissell, but not for the other complexes. Ecology may play an even larger role than distance in explaining the weighted correlations. All the meadows at Frissell have roughly the same ecology. However, the meadows at Lookout are drastically different; Outcrop and Steep are very dry, while Bog is the wettest meadow of them all. At Carpenter, Saddle and Ridge are very dry, while Main is moister and Basin is wetter and at a lower elevation. Differing ecologies likely mean different types of flowers will grow at different places, and likely explains why unique flowers grow at Lookout Bog or why very little grows at Carpenter Ridge or Carpenter Saddle. This seems to provide a better explanation than the distance theory.

Several challenges and sensitivities likely limit the conclusions this study can draw. The data from 2011-2014 did not include the activity of the pollinator, meaning that a pollinator could have actually been “waiting” on a flower rather than “pollinating”. This skews the interaction proportions of the pollinators, and likely gives them interactions on flowers with which they do not possess the ability to access. As researchers of the EISI program have limited identification skills at the beginning of the

summer, it is quite likely that mistakes were made out in the field, either with identifying plants and pollinators or with identifying interactions seen out in the field. These mistakes also skew the data and mistakes in recording interactions could have created incorrect interaction proportions and preference scores, which would serve to hide existing preference lists. For this study, all watches were combined and served as one total meadow flower count. However, it is possible that a pollinator's living season only occurs for a part of the summer. In this case, not all flowers would be available for the pollinator, as it is only around for part of the summer. This would again skew the results of the preference scores because it may be including flowers in a ranking that do not overlap with the pollinator's life cycle, and thus could be hiding true preference rankings. Finally, the Spearman correlations and all further tests were done only using *Apis mellifera* due to time constraints. It is possible that using other vectors for comparison could have yielded different results or higher correlations, but for this study we are limited to drawing conclusions solely for *Apis mellifera*.

Conclusion

In conclusion, it appears that generalist pollinators indeed do tend to have ordered preference of at least some flowers. Their visitation path through a meadow does not appear to be random, as the interaction frequency is far different from the flower proportion throughout a meadow, suggesting that there exist some factors which push a pollinator to visit certain flowers more often and some less often than would be expected given the flower distribution. However, it remains to be seen whether pollinators truly have a set listing of flowers they prefer over others. It appears more likely that generalist pollinators will have two or three flowers they value over all others, but there are many challenges to creating a master preference list which would rank all flowers by order of preference. Meadow ecology also may be a large factor in determining common flowers between two meadows, which plants can grow there, and subsequently, how the pollinators will interact within the meadow. These results could have implications with obtaining more knowledge on generalist pollinators and filling in gaps in our knowledge of them. Knowing their favorite flowers will help provide a better understanding of pollinator habitat, and may explain where they choose to live. If their favorite flowers reside in an area, this is more likely to be a place where they choose to live rather than a place devoid of these flowers. As some pollinators, especially *Apis mellifera*, as well as others, are seeing their populations decline, these results could be useful in fighting these dwindling numbers. Habitats where the most popular flowers are abundant could be protected to a greater degree in order to preserve a section of land where these insects likely live in larger numbers. It may even be possible to bring pollinators back to other areas by planting their preferred flowers in those areas, especially if it is indeed true that pollinators will have greater numbers of interactions in areas with their most preferred flowers. Future research in this topic should look for meadows which contain a similar ecology, as well as a sufficiently high number of interactions. If data is limited to high-density plant-pollinator interactions, it may provide higher Spearman correlations, which would imply greater similarity in preference rankings across meadows. From this, it may be possible to compose at least a partial listing of which flower species certain generalist pollinators do and do not like. Expanding the scope of pollinators to some of the top pollinators in the area would also provide more data on pollinator preference which would allow the scope of inference to expand beyond this study's focus on *Apis mellifera*.

Sources:

- Jones, Katherine E. *Spatio - Temporal Patterns of Tree Establishment in the M1 Meadow of the HJ Andrews Experimental Forest*. 2016. Oregon State University, MS thesis. *H. J. Andrews Forest*, Oregon State University, andrewsforest.oregonstate.edu/sites/default/files/lter/pubs/pdf/pub4938.pdf. Accessed 15 Aug. 2017.
- Kumaran, Sneha Krishna. "Identifying a Ranking of Plant Preferences for a Pollinator." Oregon State University, University Honors College, 11 May 2015. Accessed 15 Aug. 2017. Manuscript.
- Moldenke, Andrew R. "General Pollinator Information." *H. J. Andrews Experimental Forest*, 2017. Lecture.
- Thomas, Anne. "The Influence of Pollinator Traits on Algorithm-based Module Detection in the H.J. Andrews Plant-pollinator Network." Oregon State University, 2016, agsci.oregonstate.edu/sites/agscid7/files/eisi/thomas_eisi_2016_paper.pdf. Accessed 15 Aug. 2017. Manuscript.

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Tables:

Table 1: Flower proportions, interaction proportions, and preference scores (flowers/interactions) for *Apis mellifera* at Carpenter Main, 2011-2015

Flw Spp	Flw Prop	Int Prop	Pref Score
Eriophyllum lanatum	4.53E-03	0.149462	32.987
Erigeron aliceae & foliosus	1.09E-02	0.333122	30.701
Solidago canadensis	1.58E-02	0.236225	14.937
Rudbeckia occidentalis	2.46E-04	0.003167	12.871
Anaphalis margaritacea	1.16E-02	0.049398	4.277
Rainiera stricta	2.67E-03	0.0095	3.564
Rumex acetosella	3.18E-02	0.029766	0.937

<i>Angelica arguta</i>	2.04E-01	0.100063	0.491
<i>Delphinium nuttallianum</i>	8.35E-03	0.002533	0.303
<i>Eriogonum umbellatum</i>	1.75E-02	0.005066	0.289
<i>Ligusticum grayi</i>	3.98E-01	0.077897	0.196
<i>Achillea millefolium</i>	7.88E-02	0.002533	0.032
<i>Orthocarpus imbricatus</i>	2.25E-02	0.000633	0.028
<i>Holodiscus dumosus</i>	2.87E-02	0.000633	0.022
<i>Agoseris heterophylla</i>	2.26E-04	0	0.000
<i>Aquilegia formosa</i>	2.28E-03	0	0.000
<i>Calochortus subalpinus</i>	5.33E-04	0	0.000
<i>Carex</i> sp.	4.10E-05	0	0.000
<i>Castilleja hispida</i>	2.86E-03	0	0.000
<i>Chamerion angustifolium</i>	9.02E-04	0	0.000
<i>Cirsium callilepis</i>	3.83E-03	0	0.000
<i>Lilium pardalinum</i>	4.31E-04	0	0.000
<i>Lupinus laxiflorus</i>	5.39E-03	0	0.000
<i>Mimulus moschatus & guttatus</i>	4.92E-04	0	0.000
<i>Montia parvifolia</i>	2.51E-03	0	0.000
<i>Phacelia hastata</i>	6.26E-03	0	0.000
<i>Prunella vulgaris</i>	8.27E-03	0	0.000
<i>Stachys cooleyae</i>	2.85E-03	0	0.000
<i>Vicia americana</i>	2.45E-03	0	0.000
<i>Mimulus breweri</i>	1.75E-03	0	0.000
<i>Collinsia parviflora</i>	2.55E-03	0	0.000
<i>Phlox gracilis</i>	1.33E-02	0	0.000
<i>Viola orbiculata</i>	8.20E-05	0	0.000
<i>Penstemon procerus</i>	8.96E-03	0	0.000
<i>Polemonium carneum</i>	3.81E-04	0	0.000
<i>Mimulus guttatus</i>	1.79E-03	0	0.000
<i>Mimulus tilingii</i>	2.11E-03	0	0.000
<i>Allium amplectens</i>	1.03E-04	0	0.000
<i>Aster ledophyllum</i>	2.13E-04	0	0.000
<i>Epilobium oregonense</i>	2.87E-04	0	0.000
<i>Iris chrysophylla</i>	4.10E-05	0	0.000
<i>Phlox diffusa</i>	9.84E-05	0	0.000
<i>Fragaria virginiana</i>	4.10E-05	0	0.000
<i>Rubus parviflorus</i>	2.46E-04	0	0.000
<i>Gayophytum humile</i>	2.58E-03	0	0.000
<i>Lomatium martindalei</i>	2.30E-02	0	0.000
<i>Potentilla gracilis</i>	2.26E-04	0	0.000
<i>Smilacina racemosa</i>	6.15E-04	0	0.000

Carex sp X	2.05E-04	0	0.000
Drymocallis glandulosa	2.07E-03	0	0.000
Navarretia divaricata	1.44E-04	0	0.000
Mimulus moschatus	9.36E-04	0	0.000
Senecio integerrimus	6.56E-04	0	0.000
Osmorhiza sp X	7.26E-04	0	0.000
Rosa gymnocarpa	8.20E-05	0	0.000
Zigadenus venenosus	6.03E-03	0	0.000
Epilobium angustifolium	2.50E-03	0	0.000
Erysimum asperum	2.05E-04	0	0.000
Galium oreganum	1.48E-03	0	0.000
Clarkia amoena	2.87E-04	0	0.000
Perideridia gairdneri	3.36E-03	0	0.000
Platanthera dilatata	4.10E-04	0	0.000
Penstemon cardwellii	5.74E-04	0	0.000
Eriogonum compositum	4.58E-02	0	0.000
Eriogonum nudum	2.26E-03	0	0.000

Table 2: Spearman correlations for all pairs of meadows. Only interactions with common plants were taken into account; if one meadow had zero interactions with common flowers, correlation was “NA”.

Meadow 1	Meadow 2	# Common Plants	Total Plants Meadow 1	Total Plants Meadow 2	Spearman Corr.
RP1	CPB	29	50	62	0.634
CPS	LO	27	40	62	0.619
NE	M2	29	38	54	0.608
NE	RP2	27	38	48	0.584
RP2	LS	33	48	50	0.559
NE	LO	33	38	62	0.531
M2	RP2	30	54	48	0.493
RP1	RP2	36	50	48	0.480
M2	RP1	34	54	50	0.429
RP1	LS	34	50	50	0.422
NE	CPM	33	38	65	0.396
M2	CPM	37	54	65	0.373
RP1	LO	36	50	62	0.363
M2	LS	32	54	50	0.357
LM	LB	24	55	36	0.356
M2	LO	37	54	62	0.331
M2	CPB	36	54	62	0.263
CPR	CPS	20	32	40	0.258
NE	LS	29	38	50	0.228

M2	LM	37	54	55	0.228
M2	CPS	23	54	40	0.199
M2	LB	18	54	36	0.168
RP1	CPS	26	50	40	0.142
RP2	LO	35	48	62	0.133
NE	RP1	28	38	50	0.132
RP2	CPM	34	48	65	0.126
CPB	CPM	45	62	65	0.117
LO	LS	43	62	50	0.101
NE	LM	25	38	55	0.095
RP2	LB	13	48	36	0.079
CPM	LO	37	65	62	0.076
CPB	LO	35	62	62	0.067
CPB	CPS	22	62	40	0.010
CPM	CPS	26	65	40	0.000
RP2	CPS	25	48	40	-0.021
CPB	LM	39	62	55	-0.029
NE	CPB	26	38	62	-0.043
LB	LO	18	36	62	-0.051
LB	LS	16	36	50	-0.051
NE	CPS	24	38	40	-0.067
NE	LB	14	38	36	-0.091
CPM	LM	38	65	55	-0.115
RP2	LM	30	48	55	-0.149
LM	LO	36	55	62	-0.154
RP2	CPB	29	48	62	-0.160
RP1	CPM	34	50	65	-0.209
CPS	LM	22	40	55	-0.233
RP1	LM	32	50	55	-0.257
CPM	LS	35	65	50	-0.329
CPB	LS	30	62	50	-0.339
RP1	LB	16	50	36	-0.413
CPS	LS	24	40	50	-0.423
CPM	LB	25	65	36	-0.485
LM	LS	32	55	50	-0.517
CPB	LB	21	62	36	-0.864
M2	CPR	17	54	32	NA
RP1	CPR	18	50	32	NA
RP2	CPR	19	48	32	NA
CPB	CPR	16	62	32	NA
CPM	CPR	23	65	32	NA

NE	CPR	17	38	32		NA
CPR	LM	21	32	55		NA
CPR	LB	10	32	36		NA
CPR	LO	22	32	62		NA
CPR	LS	20	32	50		NA
CPS	LB	11	40	36		NA

Table 3: Weighted Spearman correlations for all meadow pairs. Total number of interactions with common plants was calculated, then all were divided by the greatest value (14572) to get the weights. Weights were multiplied by correlations to get the weighted correlations.

Meadow 1	Meadow 2	INT Meadow 1	INT Meadow 2	TOT INT	Int Weight	Weighted Corr.
M2	RP2	9577	4995	14572	1	0.429
M2	LB	9845	4607	14452	0.99176503	0.329
M2	CPR	9907	4020	13927	0.95573703	0.342
M2	RP1	9292	4065	13357	0.91662092	0.452
NE	M2	2039	9849	11888	0.81581114	0.496
M2	CPB	9842	244	10086	0.69214933	0.138
RP1	LB	5146	4835	9981	0.68494373	0.248
RP1	CPB	5213	4153	9366	0.6427395	0.309
RP1	CPR	5146	4062	9208	0.63189679	0.266
LO	LS	4950	4087	9037	0.62016195	0.063
RP2	CPB	4149	4865	9014	0.61858358	0.082
RP2	CPR	4140	4062	8202	0.56286028	0.314
M2	LM	6017	1406	7423	0.50940159	0.116
NE	RP2	2192	5036	7228	0.49601976	0.065
M2	LS	5528	1481	7009	0.48099094	0.179
NE	LB	2327	4612	6939	0.47618721	0.253
M2	CPM	5908	642	6550	0.44949218	0.118
NE	CPR	2303	4035	6338	0.43494373	0.099
NE	LO	2186	4135	6321	0.43377711	0.253
CPS	LS	334	4929	5263	0.36117211	0.224
RP1	CPS	5080	91	5171	0.35485863	0.050
M2	CPS	4700	34	4734	0.32486961	0.055
CPS	LB	334	4058	4392	0.30139995	-0.128
RP2	LB	4042	92	4134	0.28369476	-0.006
LM	LB	1567	2056	3623	0.2486275	0.089
CPM	LM	1480	1407	2887	0.19811968	-0.023
RP2	CPS	2097	746	2843	0.19510019	-0.029
NE	LS	1723	1028	2751	0.18878671	0.075

RP2	LS	2034	682	2716	0.18638485	-0.030
RP2	LO	2160	506	2666	0.18295361	0.023
M2	LO	2661	0	2661	0.18261049	NA
NE	LM	2309	246	2555	0.17533626	-0.012
CPM	CPR	1399	1075	2474	0.16977766	-0.056
CPB	CPM	944	1492	2436	0.16716991	0.020
LB	LO	2059	225	2284	0.15673895	-0.008
CPB	LM	641	1579	2220	0.15234697	-0.004
LM	LS	1041	1089	2130	0.14617074	-0.076
NE	CPM	1408	591	1999	0.13718089	-0.006
NE	CPB	1399	596	1995	0.1369064	0.013
CPR	CPS	69	1850	1919	0.13169091	0.034
RP1	LS	1256	659	1915	0.13141642	-0.028
RP1	CPM	1263	596	1859	0.12757343	-0.033
RP2	LM	1688	108	1796	0.12325007	0.010
RP1	RP2	1256	409	1665	0.11426023	0.072
CPB	CPR	605	1015	1620	0.11117211	-0.038
LM	LO	778	756	1534	0.10527038	-0.016
NE	CPS	1408	35	1443	0.09902553	-0.009
CPM	LB	1027	398	1425	0.09779028	0.007
RP2	CPM	1412	0	1412	0.09689816	NA
CPM	CPS	1022	247	1269	0.08708482	0.000
CPB	LB	661	417	1078	0.07397749	0.005
CPM	LS	980	91	1071	0.07349712	-0.036
NE	RP1	1069	0	1069	0.07335987	NA
CPS	LO	334	595	929	0.0637524	-0.015
RP1	LO	922	0	922	0.06327203	NA
RP1	LM	810	91	901	0.06183091	-0.026
CPB	CPS	591	246	837	0.05743892	0.001
CPM	LO	771	0	771	0.05290969	NA
CPR	LO	0	634	634	0.0435081	NA
CPB	LS	449	127	576	0.03952786	-0.034
CPR	LM	0	563	563	0.03863574	NA
LB	LS	33	230	263	0.01804831	-0.001
CPB	LO	235	0	235	0.01612682	NA
CPR	LS	0	158	158	0.01084271	NA
CPS	LM	0	33	33	0.00226462	NA
CPR	LB	0	1	1	6.8625E-05	NA

Table 4: Unweighted correlations compared to weighted correlations.

Meadow 1	Meadow 2	Spearman Corr.	INT Weight	Weighted Corr.
NE	M2	0.608	0.815811145	0.496
M2	RP2	0.493	0.916620917	0.452
M2	RP1	0.429	1	0.429
M2	LS	0.357	0.95573703	0.342
M2	LO	0.331	0.991765029	0.329
RP2	LS	0.559	0.56286028	0.314
RP1	RP2	0.480	0.6427395	0.309
RP1	LS	0.422	0.631896788	0.266
NE	RP2	0.584	0.433777107	0.253
NE	LO	0.531	0.476187208	0.253
RP1	LO	0.363	0.684943728	0.248
CPS	LO	0.619	0.361172111	0.224
M2	CPM	0.373	0.480990942	0.179
M2	CPS	0.199	0.692149327	0.138
M2	CPB	0.263	0.449492177	0.118
M2	LM	0.228	0.509401592	0.116
NE	LS	0.228	0.434943728	0.099
LM	LB	0.356	0.248627505	0.089
RP2	LO	0.133	0.618583585	0.082
NE	CPM	0.396	0.188786714	0.075
RP1	CPB	0.634	0.114260225	0.072
NE	RP1	0.132	0.496019764	0.065
LO	LS	0.101	0.620161954	0.063
M2	LB	0.168	0.324869613	0.055
RP1	CPS	0.142	0.354858633	0.050
CPR	CPS	0.258	0.131690914	0.034
RP2	CPM	0.126	0.18295361	0.023
CPB	CPM	0.117	0.167169915	0.020
NE	LM	0.095	0.136906396	0.013
RP2	LB	0.079	0.123250069	0.010
CPM	LO	0.076	0.097790283	0.007
CPB	LO	0.067	0.073977491	0.005
CPB	CPS	0.010	0.057438924	0.001
CPM	CPS	0.000	0.08708482	0.000
LB	LS	-0.051	0.018048312	-0.001
CPB	LM	-0.029	0.152346967	-0.004
NE	CPB	-0.043	0.137180895	-0.006
RP2	CPS	-0.021	0.283694757	-0.006
LB	LO	-0.051	0.156738951	-0.008
NE	LB	-0.091	0.099025528	-0.009

NE	CPS	-0.067	0.175336261	-0.012
CPS	LM	-0.233	0.063752402	-0.015
LM	LO	-0.154	0.105270382	-0.016
CPM	LM	-0.115	0.198119682	-0.023
RP1	LB	-0.413	0.061830909	-0.026
RP1	CPM	-0.209	0.131416415	-0.028
RP2	LM	-0.149	0.195100192	-0.029
RP2	CPB	-0.160	0.186384848	-0.030
RP1	LM	-0.257	0.127573428	-0.033
CPB	LB	-0.864	0.039527862	-0.034
CPM	LB	-0.485	0.073497118	-0.036
CPB	LS	-0.339	0.111172111	-0.038
CPM	LS	-0.329	0.169777656	-0.056
LM	LS	-0.517	0.146170738	-0.076
CPS	LS	-0.423	0.301399945	-0.128
M2	CPR	NA	0.182610486	NA
RP2	CPR	NA	0.096898161	NA
NE	CPR	NA	0.073359868	NA
RP1	CPR	NA	0.063272029	NA
CPM	CPR	NA	0.05290969	NA
CPR	LO	NA	0.043508098	NA
CPR	LM	NA	0.03863574	NA
CPB	CPR	NA	0.016126819	NA
CPR	LS	NA	0.010842712	NA
CPS	LB	NA	0.002264617	NA
CPR	LB	NA	6.86248E-05	NA

Table 5: Distances between meadows in a pair compared to weighted Spearman correlations

Meadow 1	Meadow 2	Dist	Weighted Corr.
CPB	CPM	0.5	0.020
CPB	LO	8.7	0.005
CPB	CPS	1.4	0.001
CPB	LM	7.8	-0.004
CPB	LS	8.5	-0.038
CPB	LB	8.2	-0.034
CPM	LO	8.6	0.007
CPM	CPS	0.9	0.000
CPM	LM	7.7	-0.023
CPM	LS	8.4	-0.056
CPM	LB	8.1	-0.036

CPR	CPS	1.6	0.034
CPS	LO	8.1	0.224
CPS	LM	7.2	-0.015
CPS	LS	7.9	-0.128
LB	LO	0.3	-0.008
LB	LS	0.3	-0.001
LM	LB	0.6	0.089
LM	LO	0.9	-0.016
LM	LS	0.9	-0.076
LO	LS	0.3	0.063
M2	RP2	0.7	0.452
M2	RP1	0.7	0.429
M2	CPM	3.7	0.179
M2	LS	4.8	0.342
M2	LO	5.1	0.329
M2	CPB	4	0.118
M2	LM	4.2	0.116
M2	CPS	3.1	0.138
M2	LB	4.5	0.055
NE	M2	0.1	0.496
NE	RP2	0.8	0.253
NE	LO	5.2	0.253
NE	CPM	3.8	0.075
NE	LS	4.9	0.099
NE	RP1	0.8	0.065
NE	LM	4.3	0.013
NE	CPB	4.1	-0.006
NE	CPS	3.2	-0.012
NE	LB	4.6	-0.009
RP1	CPB	4.5	0.072
RP1	RP2	0.1	0.309
RP1	LS	4.1	0.266
RP1	LO	4.4	0.248
RP1	CPS	3.8	0.050
RP1	CPM	4.3	-0.028
RP1	LM	3.5	-0.033
RP1	LB	3.8	-0.026
RP2	LS	4.2	0.314
RP2	LO	4.4	0.082
RP2	CPM	4.3	0.023
RP2	LB	3.9	0.010

RP2	CPS	3.7	-0.006
RP2	LM	3.5	-0.029
RP2	CPB	4.4	-0.030

Table 6: The most common popular flowers for each of the seven most correlated meadow pairs, according to weighted Spearman correlation. The flowers were included only if they had a preference score greater than one for both meadows.

Meadow Pair	Common Popular Flowers	Rank (M1, M2)	Pref Score (M1, M2)
NE-M2	Gilia capitata	(1,1)	(24, 41)
NE-M2	Eriophyllum lanatum	(2,3)	(7.93, 9.26)
NE-M2	Erigeron aliceae & foliosus	(3,4)	(4.6, 9)
M2-RP2	Gilia capitata	(1,1)	(41, 19)
M2-RP2	Eriophyllum lanatum	(3,2)	(9.26, 12.81)
M2-RP1	Gilia capitata	(1,1)	(41, 17)
M2-RP1	Eriophyllum lanatum	(3,3)	(9.26, 4.36)
M2-LS	Gilia capitata	(1,1)	(41,32)
M2-LS	Eriophyllum lanatum	(3,3)	(9.26, 1.32)
M2-LO	Gilia capitata	(1,1)	(41,24)
M2-LO	Eriophyllum lanatum	(3,4)	(9.26, 1.76)
M2-LO	Erigeron aliceae & foliosus	(4,3)	(9, 6.58)
RP2-LS	Gilia capitata	(1,1)	(19,32)
RP2-LS	Eriophyllum lanatum	(2,3)	(12.81, 1.32)
RP1-RP2	Gilia capitata	(1,1)	(17, 19)
RP1-RP2	Eriophyllum lanatum	(3,2)	(4.36, 12.81)
RP1-RP2	Agoseris heterophylla	(5,3)	(1,6)

Figures:

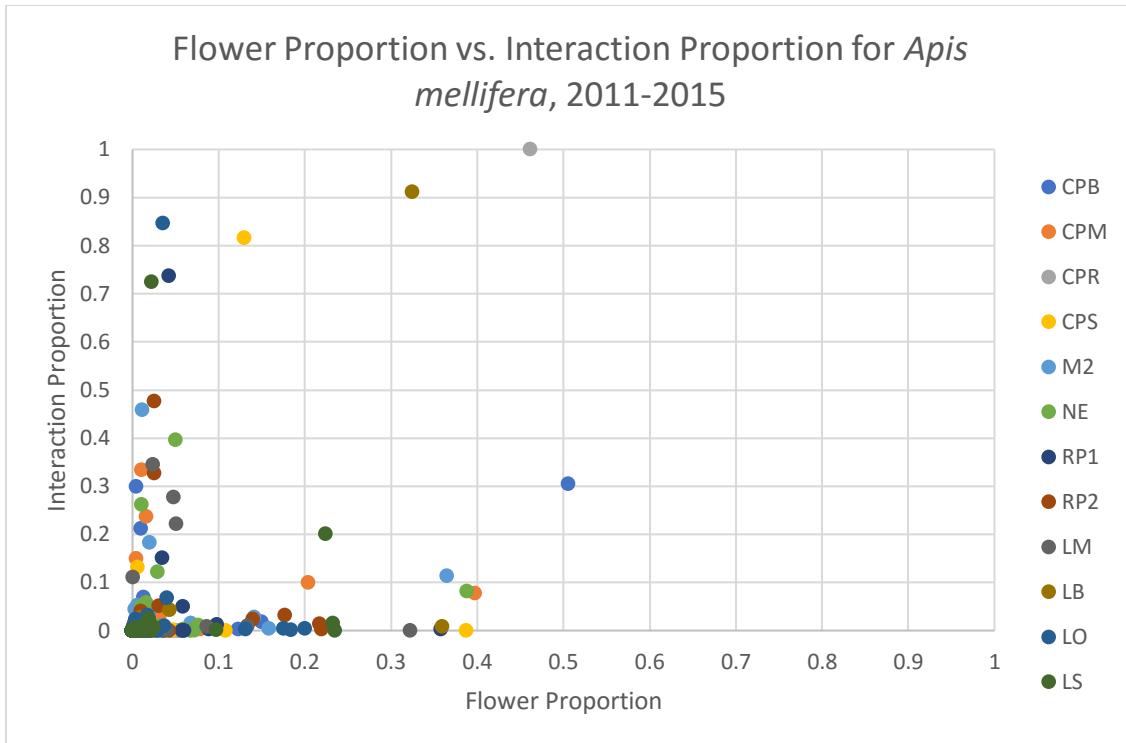


Figure 1: Flower proportion vs. interaction proportion for *Apis mellifera*, 2011-2015. A lack of linear trend, and clusters of data around the axes, suggest that flower abundance cannot explain pollinator interactions

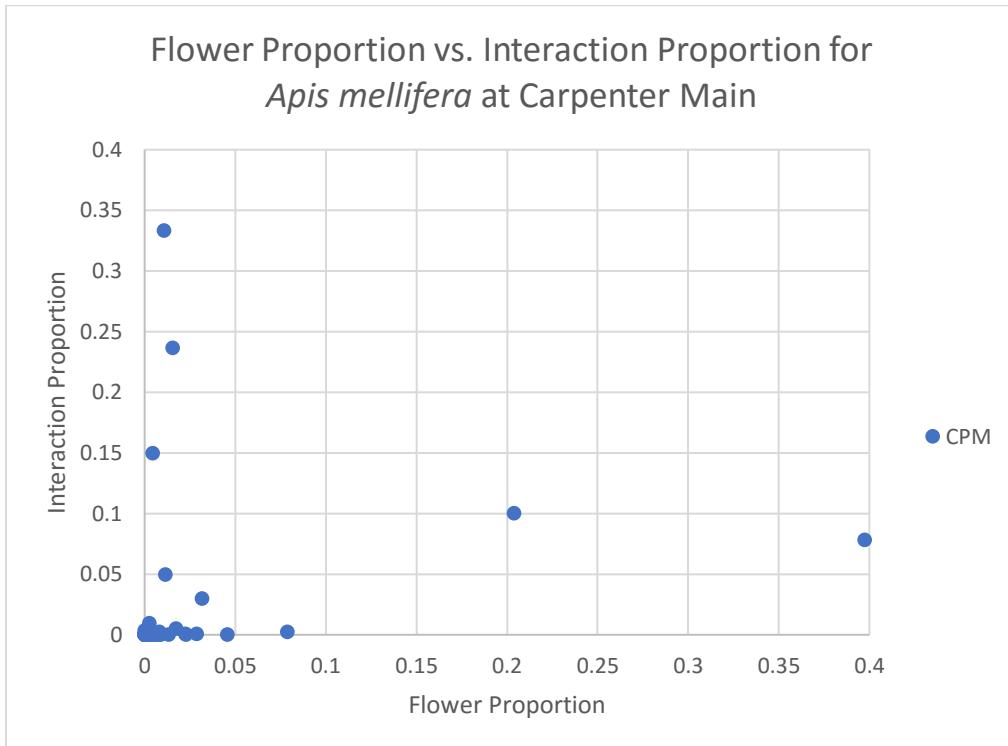


Figure 2: Flower proportion vs. interaction frequency for *Apis mellifera* at Carpenter Main. Narrowing the meadow scope, no linear trend exists, showing that flower proportion does not explain pollinator interactions.

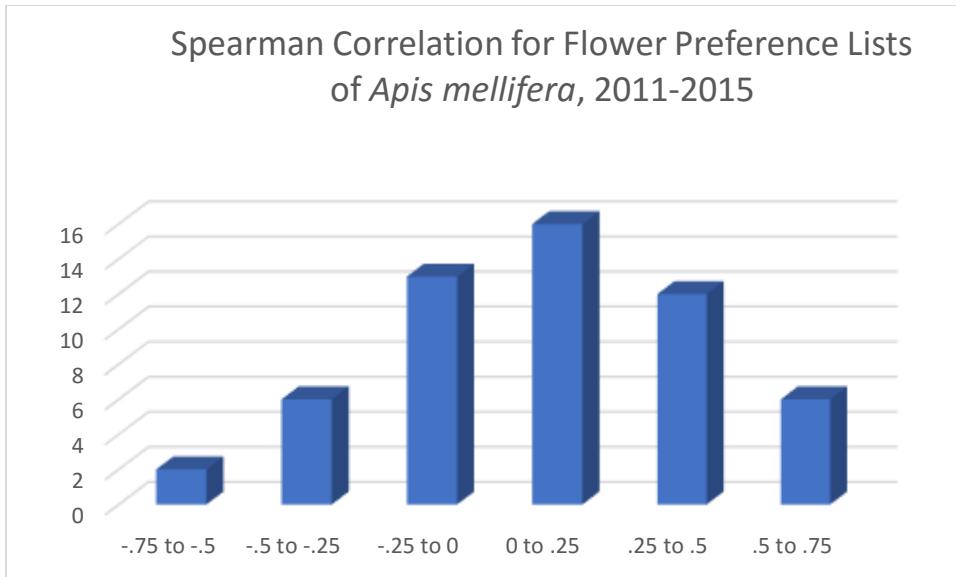


Figure 3: Spearman correlations for all pairs of meadows sampled. The distribution is approximately normal, centered around 0, and has a mean of .09.

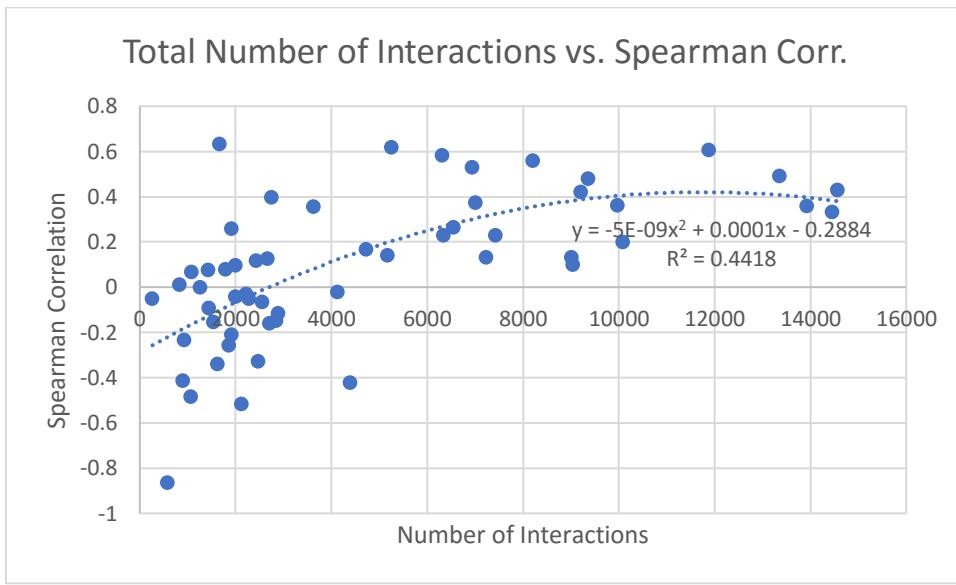


Figure 4: Total number of interactions in each pair of meadows vs. Spearman correlation for that meadow pair.

Weighted Spearman Correlation for Flower Preference of *Apis mellifera*, 2011-2015

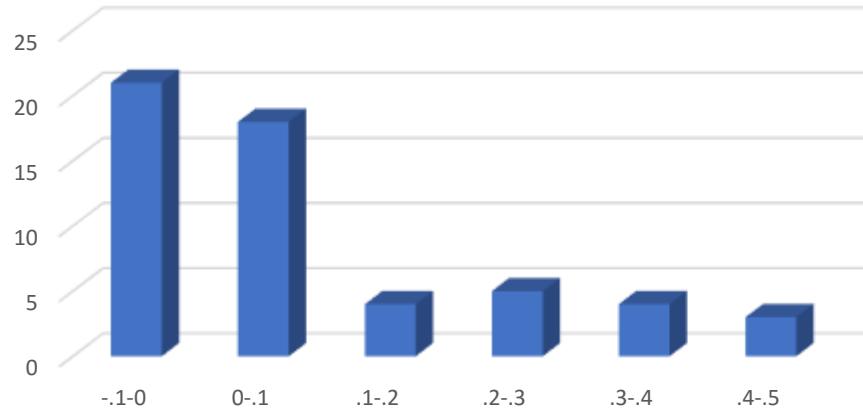


Figure 5: Weighted Spearman correlations based on total number of interactions per meadow pair. The distribution is no longer normal; rather it is strongly skewed left

Total Number of Interactions Vs. Weighted Spearman Correlation

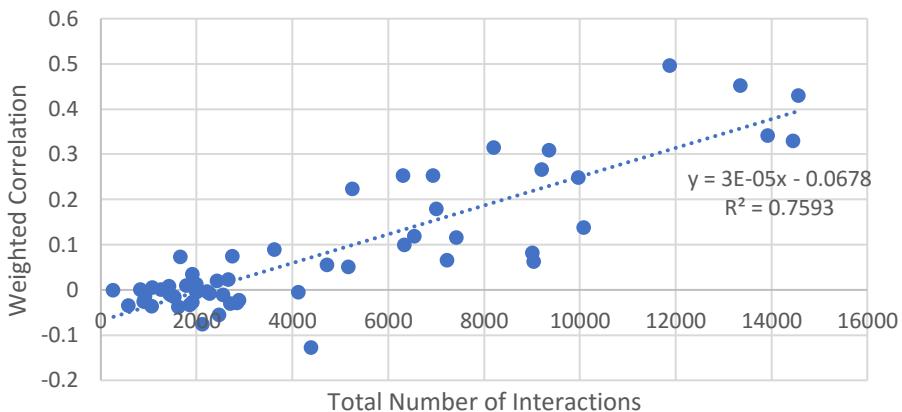


Figure 6: Total number of interactions for each pair of meadows vs. weighted Spearman correlation for that meadow pair.

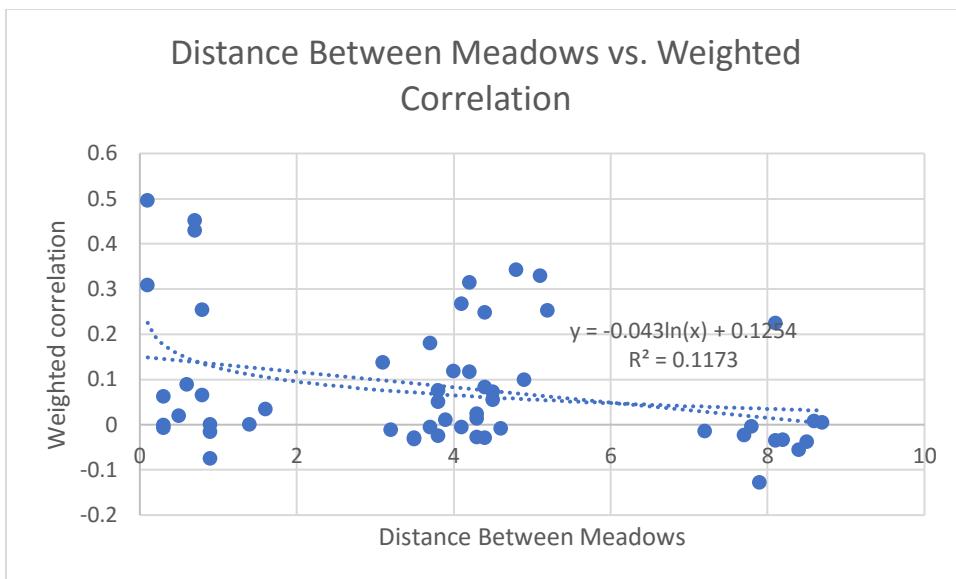


Figure 7: Distance between meadows in a pair vs. weighted Spearman correlation for that meadow pair

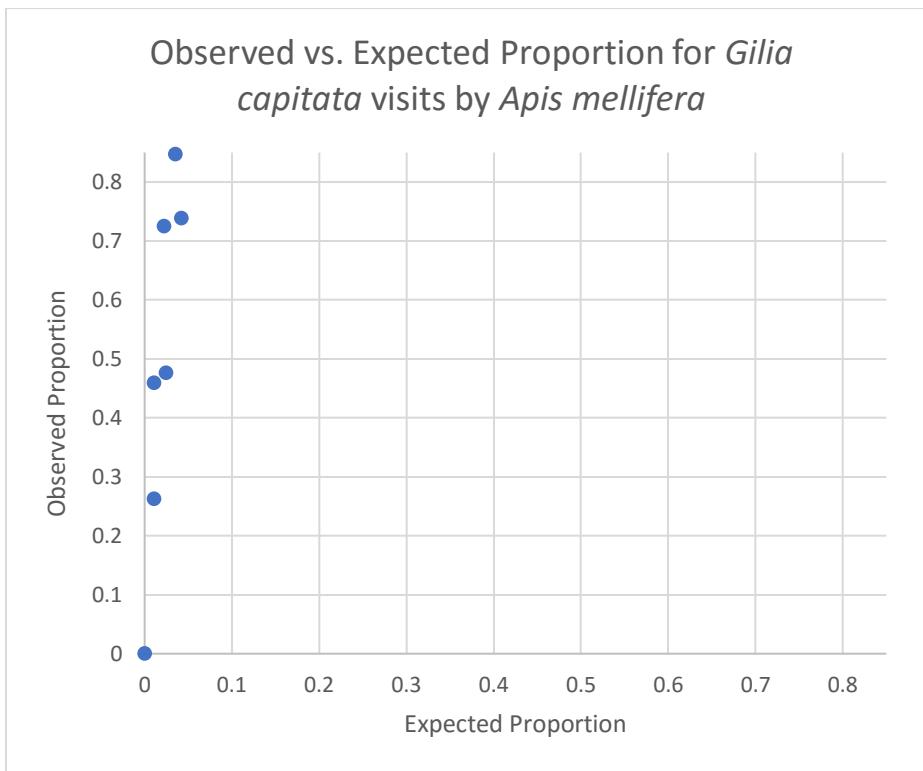


Figure 8: Expected proportion (flower abundance) vs. observed proportion (interaction frequency) for *Apis mellifera*'s interactions with *Gilia capitata* per plot for all plots the plant was present.

Appendix A: Plant-Pollinator Preference Scores

***Apis mellifera* CPB**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.150045	0.017717	0.118075
Angelica arguta	0.015925	0.033465	2.101384
Apocynum androsaemifolium	0.000609	0	0
Calochortus subalpinus	0.000203	0	0
Carex sp.	0.000203	0	0
Cirsium callilepis	0.005442	0.040354	7.415498
Clarkia amoena	0.000152	0	0
Clintonia uniflora	0.000203	0	0
Erigeron aliceae & foliosus	0.010117	0.211614	20.9168
Erysimum asperum	0.00802	0	0
Lathyrus nevadensis	0.001293	0	0
Ligusticum grayi	0.50521	0.305118	0.603943
Montia siberica	0.000811	0	0
Orthocarpus imbricatus	0.034401	0	0
Phacelia hastata	0.006962	0	0
Rudbeckia occidentalis	0.004253	0.299213	70.36014
Rumex acetosella	0.015185	0.001969	0.129639
Senecio triangularis	0.000862	0	0
Stachys cooleyae	5.07E-05	0	0
Symphoricarpos mollis	0.007176	0.001969	0.274303
Tiarella trifoliata	0.007597	0	0
Tolmiea menziesii	0.001014	0	0
Vancouveria hexandra	0.000203	0	0
Vicia americana	0.003198	0.001969	0.615604
Collinsia parviflora	0.001727	0	0
Delphinium nuttallianum	0.008828	0	0
Erythronium grandiflorum	5.07E-05	0	0
Fragaria virginiana	0.000507	0	0
Phlox gracilis	0.004775	0	0
Viola orbiculata	0.000406	0	0
Agoseris heterophylla	0.000715	0	0
Montia parvifolia	0.000578	0	0
Polemonium carneum	0.000396	0	0
Potentilla gracilis	0.001542	0	0
Rubus parviflorus	0.000609	0	0
Aster ledophyllum	0.001608	0.000984	0.612205
Lewisia triphylla	0.000456	0	0
Lomatium martindalei	0.026347	0	0

Mimulus guttatus	0.000101	0	0
Cerastium arvense	0.000101	0	0
Lupinus laxiflorus	0.001572	0	0
Mimulus tilingii	5.07E-05	0	0
Aquilegia formosa	0.000279	0	0
Perideridia gairdneri	0.000152	0	0
Eriophyllum lanatum	5.07E-05	0	0
Mimulus moschatus	0.000152	0	0
Drymocallis glandulosa	0.000152	0	0
Gayophytum humile	0.000913	0	0
Solidago canadensis	0.014454	0.014764	1.021416
Castilleja hispida	0.000355	0	0
Zigadenus venenosus	0.000811	0	0
Prunella vulgaris	0.000406	0	0
Eriogonum nudum	0.003516	0	0
Polygonum phytolaccaeefolium	0.004666	0	0
Pachistima myrsinoides	0.000254	0	0
Galium oreganum	0.000533	0	0
Valeriana scouleri	0.000279	0	0
Carex sp X	0.005528	0	0
Rainiera stricta	0.001116	0	0
Saxifraga occidentalis	0.00071	0	0
Eriogonum compositum	0.123084	0.001969	0.015993
Heracleum maximum	0.013085	0.068898	5.265438

Apis mellifera CPR

Flw Spp	Flw Prop	Int Prop	Pref Score
Castilleja hispida	0.054081	0	0
Montia parvifolia	0.011468	0	0
Penstemon cardwellii	0.060357	0	0
Sedum oreganum	0.461851	1	2.165201
Arctostaphylos nevadensis	0.003385	0	0
Collinsia parviflora	0.015742	0	0
Delphinium nuttallianum	0.035757	0	0
Phlox gracilis	0.050777	0	0
Arenaria macrophylla	0.005755	0	0
Calochortus subalpinus	0.013209	0	0

Iris chrysophylla	0.004486	0	0
Mimulus breweri	0.012166	0	0
Penstemon procerus	0.071896	0	0
Silene douglasii	0.000423	0	0
Epilobium oregonense	0.000846	0	0
Polygonum minimum	0.000423	0	0
Lupinus laxiflorus	0.042105	0	0
Gayophytum humile	0.000846	0	0
Claytonia lanceolata	0.001989	0	0
Mimulus moschatus	0.000423	0	0
Vicia americana	0.001269	0	0
Erigeron aliceae & foliosus	0.000423	0	0
Phlox diffusa	0.000508	0	0
Zigadenus venenosus	0.023909	0	0
Dicentra uniflora	0.003301	0	0
Eriophyllum lanatum	0.002116	0	0
Erysimum asperum	0.000846	0	0
Amelanchier alnifolia	0.002708	0	0
Hypericum perforatum	0.002116	0	0
Carex sp X	0.015234	0	0
Holodiscus dumosus	0.052896	0	0
Achillea millefolium	0.046689	0	0

Apis mellifera CPS

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.387616	0	0
Castilleja hispida	0.037928	0	0
Erigeron aliceae & foliosus	0.005725	0.131068	22.89509
Hypericum perforatum	0.006368	0.047465	7.453931
Ligusticum grayi	0.036988	0	0
Lupinus laxiflorus	0.010469	0	0
Phacelia hastata	0.015444	0	0
Rumex acetosella	0.046795	0.000539	0.011526
Sedum oreganum	0.129782	0.816613	6.292199
Silene douglasii	0.005073	0	0
Amelanchier alnifolia	0.01706	0.001079	0.063231
Arenaria macrophylla	0.000679	0	0

<i>Calochortus subalpinus</i>	0.005497	0.001079	0.19623
<i>Collinsia parviflora</i>	0.000679	0	0
<i>Comandra umbellata</i>	0.008433	0	0
<i>Fragaria virginiana</i>	0.002358	0	0
<i>Phlox gracilis</i>	0.019385	0	0
<i>Penstemon cardwellii</i>	0.021989	0	0
<i>Drymocallis glandulosa</i>	0.008416	0	0
<i>Rosa gymnocarpa</i>	0.002036	0.000539	0.264911
<i>Cirsium callilepis</i>	0.00492	0	0
<i>Eriophyllum lanatum</i>	0.000509	0	0
<i>Penstemon procerus</i>	0.011215	0	0
<i>Aster ledophyllus</i>	0.001527	0	0
<i>Polygonum minimum</i>	0.00017	0	0
<i>Agoseris heterophylla</i>	0.00017	0	0
<i>Phlox diffusa</i>	0.000899	0	0
<i>Arctostaphylos nevadensis</i>	0.001561	0.000539	0.345536
<i>Vaccinium alaskaense</i>	0.000339	0	0
<i>Vicia americana</i>	0.001527	0	0
<i>Saxifraga occidentalis</i>	0.0047	0	0
<i>Potentilla gracilis</i>	0.001357	0	0
<i>Gilia capitata</i>	0.000509	0	0
<i>Claytonia lanceolata</i>	0.000679	0	0
<i>Lomatium martindalei</i>	0.107724	0	0
<i>Pachistima myrsinites</i>	0.001001	0	0
<i>Anaphalis margaritacea</i>	0.003563	0	0
<i>Eriogonum umbellatum</i>	0.00492	0	0
<i>Sorbus sitchensis</i>	0.025451	0.001079	0.042386
<i>Eriogonum compositum</i>	0.058537	0	0

Apis mellifera M2

Flw Spp	Flw Prop	Int Prop	Pref Score
<i>Achillea millefolium</i>	1.58E-01	3.69E-03	0.023
<i>Angelica arguta</i>	1.42E-01	2.74E-02	0.193
<i>Aquilegia formosa</i>	6.30E-03	0.00E+00	0.000

Carex sp.	3.27E-05	0.00E+00	0.000
Castilleja hispida	1.55E-03	0.00E+00	0.000
Cerastium arvense	2.76E-04	0.00E+00	0.000
Cirsium callilepis	4.84E-03	1.62E-03	0.335
Delphinium nuttallianum	9.21E-03	0.00E+00	0.000
Erigeron aliceae & foliosus	5.76E-03	5.18E-02	9.001
Eriogonum nudum	1.62E-03	0.00E+00	0.000
Eriophyllum lanatum	1.98E-02	1.83E-01	9.261
Erysimum asperum	1.13E-02	4.50E-04	0.040
Gayophytum humile	2.04E-03	0.00E+00	0.000
Gilia capitata	1.13E-02	4.58E-01	40.705
Lathyrus nevadensis	2.78E-04	0.00E+00	0.000
Ligusticum grayi	3.65E-01	1.14E-01	0.312
Lupinus laxiflorus	1.33E-02	9.00E-05	0.007
Mimulus moschatus & guttatus	1.47E-04	0.00E+00	0.000
Orthocarpus imbricatus	3.13E-02	1.80E-04	0.006
Phacelia hastata	1.06E-02	1.80E-04	0.017
Phlox gracilis	5.82E-03	0.00E+00	0.000
Polemonium carneum	4.48E-04	0.00E+00	0.000
Potentilla gracilis	1.04E-02	4.25E-02	4.076
Rumex acetosella	6.76E-02	1.52E-02	0.225
Silene douglasii	4.90E-05	0.00E+00	0.000
Solidago canadensis	1.12E-02	6.03E-03	0.541

<i>Symphoricarpos mollis</i>	2.71E-03	4.44E-02	16.345
<i>Vicia americana</i>	3.90E-03	1.80E-04	0.046
<i>Arenaria capillaris</i>	2.80E-04	0.00E+00	0.000
<i>Collinsia parviflora</i>	2.82E-03	0.00E+00	0.000
<i>Mimulus guttatus</i>	2.98E-04	0.00E+00	0.000
<i>Mimulus breweri</i>	1.23E-03	0.00E+00	0.000
<i>Mimulus tilingii</i>	1.02E-03	0.00E+00	0.000
<i>Sagina saginoides</i>	3.27E-05	0.00E+00	0.000
<i>Drymocallis glandulosa</i>	1.04E-03	1.71E-03	1.639
<i>Aster ledophyllus</i>	4.25E-04	0.00E+00	0.000
<i>Agoseris aurantiaca</i>	3.27E-05	0.00E+00	0.000
<i>Phlox diffusa</i>	3.27E-05	0.00E+00	0.000
<i>Stellaria crispa</i>	2.65E-04	0.00E+00	0.000
<i>Lotus micranthus</i>	5.26E-04	0.00E+00	0.000
<i>Navarretia divaricata</i>	1.43E-03	0.00E+00	0.000
<i>Polygonum minimum</i>	1.96E-04	0.00E+00	0.000
<i>Campanula scouleri</i>	3.27E-05	0.00E+00	0.000
<i>Perideridia gairdneri</i>	1.91E-02	3.61E-02	1.886
<i>Barbarea orthoceras</i>	5.89E-04	0.00E+00	0.000
<i>Eriogonum umbellatum</i>	1.29E-03	1.02E-02	7.872
<i>Mimulus moschatus</i>	6.87E-05	0.00E+00	0.000
<i>Lithophragma parviflora</i>	6.54E-05	0.00E+00	0.000
<i>Lewisia triphylla</i>	6.87E-05	0.00E+00	0.000

Polygonum douglasii	7.62E-05	0.00E+00	0.000
Lomatium martindalei	5.72E-03	1.80E-04	0.031
Eriogonum compositum	6.50E-02	3.15E-03	0.048
Holodiscus dumosus	6.18E-04	0.00E+00	0.000
Saxifraga occidentalis	1.62E-03	0.00E+00	0.000

***Apis mellifera* NE**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.072781	0.001286	0.017668
Agoseris heterophylla	0.000991	0.003858	3.891493
Anaphalis margaritacea	0.029046	0.12216	4.205823
Calochortus subalpinus	0.00085	0	0
Carex sp.	0.000142	0	0
Castilleja hispida	0.023185	0	0
Cirsium callilepis	0.016073	0.058294	3.626727
Collinsia parviflora	0.004957	0	0
Delphinium nuttallianum	0.002832	0	0
Erigeron aliceae & foliosus	0.0109	0.05015	4.60083
Eriogonum nudum	0.001275	0	0
Eriogonum umbellatum	0.059351	0.002572	0.043332
Eriophyllum lanatum	0.049995	0.396485	7.930524
Erysimum asperum	0.016923	0	0
Gilia capitata	0.010791	0.261466	24.22962
Ligusticum grayi	0.388171	0.081012	0.208701
Lupinus laxiflorus	0.029325	0	0
Orthocarpus imbricatus	0.067459	0	0
Phacelia hastata	0.018941	0.002572	0.135778
Phlox gracilis	0.00337	0	0
Rumex acetosella	0.032134	0.00943	0.293455
Gayophytum humile	0.000566	0	0
Mimulus breweri	0.001275	0	0
Potentilla gracilis	0.002124	0	0
Aster ledophyllum	0.000283	0	0
Drymocallis glandulosa	0.001119	0	0

Dodecatheon alpinum	0.000283	0	0
Vicia americana	0.000283	0	0
Penstemon procerus	0.005452	0	0
Campanula scouleri	0.000283	0	0
Galium oreganum	0.001629	0	0
Penstemon cardwellii	0.000708	0	0
Eriogonum compositum	0.056717	0.000429	0.007557
Lomatium martindalei	0.009417	0	0
Sedum spathulifolium	0.000991	0	0
Epilobium oregonense	0.001133	0	0
Barbarea orthoceras	0.002053	0	0
Holodiscus dumosus	0.07619	0.010287	0.135021

Apis mellifera RP1

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.58E-01	0.002302	0.006
Agoseris heterophylla	7.61E-03	0.007673	1.008
Angelica arguta	2.39E-04	0	0.000
Calochortus subalpinus	2.79E-03	0.000192	0.069
Castilleja hispida	6.03E-02	0	0.000
Cerastium arvense	2.11E-03	0	0.000
Cirsium callilepis	3.98E-04	0	0.000
Clarkia amoena	2.12E-03	0.012469	5.894
Eriogonum compositum	8.89E-02	0.00211	0.024
Eriogonum nudum	9.83E-02	0.012469	0.127
Eriogonum umbellatum	5.81E-02	0	0.000
Eriophyllum lanatum	3.45E-02	0.150393	4.362
Gilia capitata	4.23E-02	0.737579	17.425

<i>Lupinus laxiflorus</i>	3.15E-02	0.00211	0.067
<i>Orthocarpus imbricatus</i>	1.21E-02	0.000384	0.032
<i>Rumex acetosella</i>	5.84E-02	0.050067	0.857
<i>Vicia americana</i>	2.53E-03	0.000192	0.076
<i>Lithophragma tenellum</i>	2.94E-04	0	0.000
<i>Arenaria capillaris</i>	4.33E-03	0	0.000
<i>Penstemon procerus</i>	6.92E-03	0	0.000
<i>Phlox gracilis</i>	1.11E-02	0	0.000
<i>Collinsia parviflora</i>	2.23E-03	0	0.000
<i>Gayophytum humile</i>	2.08E-03	0	0.000
<i>Lathyrus nevadensis</i>	6.05E-04	0	0.000
<i>Mimulus guttatus</i>	7.96E-05	0	0.000
<i>Navarretia divaricata</i>	1.89E-03	0	0.000
<i>Stellaria crispa</i>	9.55E-04	0	0.000
<i>Mimulus breweri</i>	3.23E-03	0	0.000
<i>Hypericum perforatum</i>	1.21E-02	0.021485	1.772
<i>Epilobium oregonense</i>	6.21E-04	0	0.000
<i>Galium aparine</i>	7.96E-05	0	0.000
<i>Acmispon nevadensis</i>	7.15E-03	0	0.000
<i>Senecio integerrimus</i>	7.96E-05	0	0.000
<i>Delphinium nuttallianum</i>	9.15E-04	0.000192	0.210
<i>Phlox diffusa</i>	4.85E-04	0	0.000
<i>Erysimum asperum</i>	1.28E-03	0	0.000

Drymocallis glandulosa	5.57E-04	0	0.000
Ranunculus uncinatus	3.18E-04	0	0.000
Madia minima	1.62E-03	0	0.000
Polygonum minimum	2.39E-04	0	0.000
Zigadenus venenosus	3.93E-03	0	0.000
Comandra umbellata	3.18E-04	0	0.000
Lotus micranthus	9.55E-04	0	0.000
Phacelia hastata	4.77E-04	0	0.000
Potentilla gracilis	4.77E-04	0	0.000
Lomatium martindalei	2.17E-02	0	0.000
Lomatium triternatum	3.58E-02	0	0.000
Ligusticum grayi	1.24E-02	0.000384	0.031
Saxifraga occidentalis	1.99E-03	0	0.000
Anaphalis margaritacea	2.39E-03	0	0.000

Apis mellifera RP2

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.19E-01	0.002402	0.011
Acmispon nevadensis	1.31E-02	0	0.000
Calochortus subalpinus	1.76E-03	0	0.000
Castilleja hispida	4.24E-02	0	0.000
Cirsium callilepis	1.72E-03	0.002162	1.255
Collinsia parviflora	2.24E-03	0	0.000
Eriogonum nudum	1.40E-01	0.02306	0.165

<i>Eriogonum umbellatum</i>	1.77E-01	0.031468	0.178
<i>Eriophyllum lanatum</i>	2.55E-02	0.326928	12.817
<i>Erysimum asperum</i>	1.45E-03	0.002402	1.653
<i>Gilia capitata</i>	2.50E-02	0.476099	19.023
<i>Hypericum perforatum</i>	5.83E-03	0.002883	0.495
<i>Lupinus laxiflorus</i>	2.57E-02	0.004084	0.159
<i>Orthocarpus imbricatus</i>	1.29E-03	0	0.000
<i>Penstemon procerus</i>	8.62E-04	0.00024	0.279
<i>Rumex acetosella</i>	3.05E-02	0.051645	1.694
<i>Silene douglasii</i>	8.01E-03	0	0.000
<i>Agoseris heterophylla</i>	3.08E-03	0.018496	5.997
<i>Arenaria capillaris</i>	1.04E-03	0.00024	0.231
<i>Arenaria macrophylla</i>	1.46E-04	0	0.000
<i>Phlox gracilis</i>	1.03E-02	0	0.000
<i>Viola orbiculata</i>	6.63E-05	0	0.000
<i>Clarkia amoena</i>	2.01E-03	0.000721	0.359
<i>Rosa gymnocarpa</i>	6.63E-05	0.00024	3.624
<i>Vicia americana</i>	1.15E-03	0	0.000
<i>Gayophytum humile</i>	3.65E-04	0	0.000
<i>Mimulus breweri</i>	8.68E-04	0	0.000
<i>Epilobium angustifolium</i>	6.63E-05	0	0.000
<i>Delphinium nuttallianum</i>	4.97E-04	0	0.000
<i>Navarretia divaricata</i>	3.98E-04	0	0.000

<i>Symphoricarpos mollis</i>	5.47E-03	0.001681	0.308
<i>Aster ledophyllus</i>	1.33E-04	0	0.000
<i>Haplopappus hallii</i>	6.63E-05	0	0.000
<i>Cerastium arvense</i>	6.63E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.99E-04	0	0.000
<i>Epilobium oregonense</i>	2.65E-04	0	0.000
<i>Lathyrus nevadensis</i>	3.31E-04	0	0.000
<i>Polygonum douglasii</i>	9.94E-05	0	0.000
<i>Zigadenus venenosus</i>	3.43E-03	0.00024	0.070
<i>Eriogonum compositum</i>	2.17E-01	0.013932	0.064
<i>Lomatium triternatum</i>	1.12E-02	0.00024	0.021
<i>Anaphalis margaritacea</i>	2.25E-03	0	0.000
<i>Lomatium martindalei</i>	3.08E-03	0	0.000
<i>Ribes viscosissimum</i>	9.28E-04	0	0.000
<i>Ligusticum grayi</i>	9.68E-03	0.040356	4.170
<i>Phlox diffusa</i>	3.98E-03	0	0.000

Apis mellifera LM

Flw Spp	Flw Prop	Int Prop	Pref Score
<i>Achillea millefolium</i>	3.22E-01	0	0.000
<i>Calochortus subalpinus</i>	2.03E-03	0	0.000
<i>Carex sp.</i>	2.03E-04	0	0.000
<i>Castilleja hispida</i>	3.70E-02	0	0.000
<i>Cirsium callilepis</i>	4.07E-04	0	0.000

<i>Claytonia lanceolata</i>	4.07E-04	0	0.000
<i>Collinsia parviflora</i>	4.00E-03	0	0.000
<i>Delphinium nuttallianum</i>	8.99E-03	0	0.000
<i>Erigeron aliceae & foliosus</i>	3.43E-03	0.008816	2.574
<i>Eriophyllum lanatum</i>	2.36E-02	0.344458	14.596
<i>Lathyrus nevadensis</i>	3.15E-03	0	0.000
<i>Ligusticum grayi</i>	1.33E-01	0.009446	0.071
<i>Mimulus moschatus & guttatus</i>	5.99E-04	0.002519	4.208
<i>Montia parvifolia</i>	5.06E-03	0	0.000
<i>Montia siberica</i>	4.07E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.99E-02	0.00063	0.016
<i>Orthocarpus imbricatus</i>	6.78E-05	0	0.000
<i>Penstemon procerus</i>	1.82E-02	0	0.000
<i>Phlox gracilis</i>	2.02E-02	0	0.000
<i>Potentilla gracilis</i>	2.29E-02	0.008186	0.358
<i>Rumex acetosella</i>	1.92E-02	0	0.000
<i>Sedum stenopetalum</i>	1.36E-04	0	0.000
<i>Solidago canadensis</i>	4.75E-02	0.277078	5.838
<i>Vicia americana</i>	5.75E-03	0.00063	0.110
<i>Mimulus guttatus</i>	8.32E-03	0.00063	0.076
<i>Mimulus breweri</i>	5.31E-03	0	0.000
<i>Drymocallis glandulosa</i>	1.22E-02	0.003149	0.258
<i>Arenaria capillaris</i>	8.81E-04	0	0.000

<i>Epilobium oregonense</i>	3.17E-03	0	0.000
<i>Mimulus tilingii</i>	5.06E-03	0.00063	0.125
<i>Convolvulus nyctagineus</i>	6.78E-05	0	0.000
<i>Cerastium arvense</i>	2.71E-04	0	0.000
<i>Saxifraga occidentalis</i>	6.78E-05	0	0.000
<i>Platanthera dilatata</i>	6.78E-05	0	0.000
<i>Lewisia triphylla</i>	1.36E-04	0	0.000
<i>Mimulus moschatus</i>	2.32E-03	0	0.000
<i>Erysimum asperum</i>	2.71E-04	0	0.000
<i>Gayophytum humile</i>	7.46E-05	0	0.000
<i>Aquilegia formosa</i>	5.02E-04	0	0.000
<i>Lupinus laxiflorus</i>	1.97E-02	0	0.000
<i>Symporicarpos mollis</i>	2.03E-04	0	0.000
<i>Angelica arguta</i>	8.64E-02	0.007557	0.087
<i>Hypericum perforatum</i>	2.03E-04	0	0.000
<i>Zigadenus venenosus</i>	2.84E-02	0.00063	0.022
<i>Perideridia gairdneri</i>	5.12E-02	0.221662	4.333
<i>Stachys cooleyae</i>	3.39E-04	0	0.000
<i>Boykinia major</i>	3.39E-04	0.003149	9.289
<i>Senecio triangularis</i>	6.78E-04	0.110831	163.490
<i>Polemonium carneum</i>	1.73E-03	0	0.000
<i>Saxifraga oregana</i>	1.23E-02	0	0.000
<i>Comandra umbellata</i>	5.20E-04	0	0.000

Eriogonum nudum	5.42E-04	0	0.000
Eriogonum compositum	1.80E-02	0	0.000
Eriogonum umbellatum	2.03E-02	0	0.000
Arenaria macrophylla	2.03E-03	0	0.000

***Apis mellifera* LB**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.022235	0	0
Boykinia major	0.324468	0.911751	2.809988
Carex sp.	0.013402	0	0
Castilleja hispida	0.000307	0	0
Dodecatheon jeffreyi	0.003536	0	0
Epilobium oregonense	0.002454	0	0
Eriophyllum lanatum	0.002607	0.000472	0.181029
Heracleum maximum	0.021468	0.001416	0.065946
Hypericum anagalloides	0.002046	0	0
Ligusticum grayi	0.359084	0.008023	0.022342
Lupinus laxiflorus	0.011961	0	0
Mimulus moschatus & guttatus	0.002147	0	0
Mitella pentandra	0.001635	0.000472	0.288695
Platanthera dilatata	0.010428	0	0
Scirpus sp.	0.002147	0	0
Senecio triangularis	0.042998	0.042473	0.987782
Solidago canadensis	0.02659	0	0
Stachys cooleyae	0.020999	0	0
Vicia americana	0.011072	0	0
Dodecatheon alpinum	0.023309	0.000944	0.040493
Mertensia bella	0.000613	0	0
Mimulus tilingii	0.006134	0	0
Phlox gracilis	0.000307	0	0
Prunella vulgaris	0.000307	0	0
Senecio integerrimus	0.00963	0.026899	2.793263
Mimulus moschatus	0.000859	0	0
Collinsia grandiflora	0.001472	0	0
Potentilla gracilis	0.001533	0.007079	4.616234

Mimulus guttatus	0.001874	0.000472	0.25184
Cerastium arvense	0.00092	0	0
Penstemon procerus	0.001227	0	0
Eriogonum umbellatum	0.004907	0	0
Angelica arguta	0.012268	0	0
Carex sp X	0.009201	0	0
Anaphalis margaritacea	0.022389	0	0
Perideridia gairdneri	0.021468	0	0

Apis mellifera LO

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.75E-01	0.004216	0.024
Castilleja hispida	1.35E-02	0	0.000
Cirsium callilepis	1.59E-03	0.001606	1.012
Collinsia parviflora	2.16E-03	0	0.000
Delphinium nuttallianum	8.70E-04	0	0.000
Epilobium oregonense	1.44E-03	0	0.000
Erigeron aliceae & foliosus	3.51E-03	0.023088	6.582
Eriogonum compositum	1.84E-01	0.001405	0.008
Eriogonum nudum	2.00E-01	0.003614	0.018
Eriogonum umbellatum	1.31E-01	0.00261	0.020
Eriophyllum lanatum	1.79E-02	0.03152	1.761
Fragaria virginiana	2.56E-04	0	0.000
Gayophytum humile	3.74E-03	0	0.000
Gilia capitata	3.51E-02	0.846015	24.070
Heracleum maximum	1.60E-03	0	0.000
Hypericum perforatum	3.98E-02	0.067456	1.694

<i>Lathyrus nevadensis</i>	1.15E-03	0.000602	0.523
<i>Lupinus laxiflorus</i>	2.62E-02	0.000803	0.031
<i>Lupinus laxiflorus</i>	3.84E-04	0	0.000
<i>Montia parvifolia</i>	2.56E-04	0	0.000
<i>Montia siberica</i>	1.13E-03	0	0.000
<i>Mycelis muralis</i>	1.28E-04	0	0.000
<i>Navarretia divaricata</i>	1.38E-03	0	0.000
<i>Penstemon cardwellii</i>	1.28E-04	0	0.000
<i>Phlox gracilis</i>	5.62E-03	0	0.000
<i>Potentilla gracilis</i>	1.54E-03	0	0.000
<i>Rumex acetosella</i>	3.65E-02	0.008834	0.242
<i>Tiarella trifoliata</i>	5.12E-04	0	0.000
<i>Vicia americana</i>	2.30E-03	0	0.000
<i>Arenaria capillaris</i>	1.41E-04	0	0.000
<i>Calochortus subalpinus</i>	1.02E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.31E-03	0	0.000
<i>Agoseris heterophylla</i>	5.06E-03	0.001606	0.317
<i>Aster ledophyllum</i>	8.26E-04	0	0.000
<i>Hieracium cynoglossoides</i>	6.40E-05	0	0.000
<i>Lithophragma parviflora</i>	3.20E-04	0	0.000
<i>Silene douglasii</i>	3.20E-04	0	0.000
<i>Mimulus breweri</i>	5.44E-04	0	0.000
<i>Dichelostemma congestum</i>	1.43E-03	0	0.000

Galium oreganum	6.40E-05	0	0.000
Saxifraga occidentalis	4.90E-03	0	0.000
Boykinia major	6.40E-05	0	0.000
Campanula scouleri	4.48E-04	0	0.000
Cerastium arvense	5.44E-04	0	0.000
Mimulus moschatus	6.40E-05	0	0.000
Taraxacum officinale	6.40E-05	0	0.000
Polemonium carneum	7.68E-05	0	0.000
Mimulus guttatus	9.60E-05	0	0.000
Sedum spathulifolium	1.02E-04	0	0.000
Penstemon procerus	1.69E-03	0	0.000
Stellaria crispa	1.33E-02	0	0.000
Lomatium martindalei	1.86E-02	0.000402	0.022
Erysimum asperum	1.09E-03	0	0.000
Acmispon nevadensis	2.29E-03	0	0.000
Sibbaldia procumbens	5.14E-04	0	0.000
Circaeа alpina	7.04E-04	0	0.000
Senecio triangularis	3.20E-04	0.006023	18.820
Holodiscus dumosus	1.82E-02	0.000201	0.011
Polygonum douglasii	3.84E-04	0	0.000
Zigadenus venenosus	2.08E-03	0	0.000
Anaphalis margaritacea	1.28E-03	0	0.000
Ligusticum grayi	2.93E-02	0	0.000

Apis mellifera LS

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.35E-01	0	0.000
Acmispon nevadensis	2.66E-03	0	0.000
Agoseris heterophylla	5.54E-03	0.003425	0.619
Calochortus subalpinus	1.55E-03	0.000245	0.158
Castilleja hispida	1.14E-02	0	0.000
Cerastium arvense	1.03E-02	0	0.000
Cirsium callilepis	1.03E-03	0.000245	0.238
Collinsia parviflora	4.49E-03	0	0.000
Dichelostemma congestum	4.02E-03	0.005872	1.460
Drymocallis glandulosa	3.33E-03	0	0.000
Eriogonum compositum	2.24E-01	0.200636	0.895
Eriogonum nudum	9.69E-02	0.000979	0.010
Eriogonum umbellatum	2.33E-01	0.014925	0.064
Eriophyllum lanatum	1.88E-02	0.024713	1.317
Gilia capitata	2.26E-02	0.724248	32.055
Hypericum perforatum	9.22E-03	0.006606	0.716
Lathyrus nevadensis	4.08E-04	0	0.000
Lomatium martindalei	2.31E-03	0	0.000
Lupinus laxiflorus	2.43E-02	0.007096	0.292
Mimulus breweri	1.98E-03	0	0.000
Mimulus moschatus & guttatus	2.17E-04	0	0.000

<i>Montia parvifolia</i>	2.35E-04	0	0.000
<i>Phlox gracilis</i>	5.31E-03	0	0.000
<i>Potentilla gracilis</i>	1.10E-03	0	0.000
<i>Rumex acetosella</i>	1.12E-02	0.001223	0.110
<i>Silene douglasii</i>	1.63E-04	0	0.000
<i>Vicia americana</i>	2.23E-03	0	0.000
<i>Iris chrysophylla</i>	5.43E-05	0	0.000
<i>Mimulus tilingii</i>	2.41E-03	0	0.000
<i>Stellaria crispa</i>	9.13E-04	0	0.000
<i>Campanula scouleri</i>	5.43E-05	0	0.000
<i>Galium oreganum</i>	2.99E-04	0	0.000
<i>Ranunculus uncinatus</i>	5.43E-05	0	0.000
<i>Viola orbiculata</i>	2.45E-04	0	0.000
<i>Gayophytum humile</i>	4.62E-04	0	0.000
<i>Mimulus moschatus</i>	5.49E-04	0	0.000
<i>Taraxacum officinale</i>	5.43E-05	0	0.000
<i>Arenaria capillaris</i>	8.15E-05	0	0.000
<i>Delphinium nuttallianum</i>	1.09E-04	0	0.000
<i>Penstemon procerus</i>	7.79E-03	0	0.000
<i>Zigadenus venenosus</i>	1.85E-03	0	0.000
<i>Lomatium triternatum</i>	1.90E-04	0	0.000
<i>Penstemon cardwellii</i>	1.90E-04	0	0.000
<i>Navarretia divaricata</i>	5.43E-04	0	0.000

Solidago canadensis	5.43E-04	0	0.000
Sedum spathulifolium	5.43E-04	0	0.000
Anaphalis margaritacea	2.09E-02	0	0.000
Ligusticum grayi	2.13E-02	0.009542	0.448
Erigeron aliceae & foliosus	8.15E-03	0	0.000

Bombus mixtus CPB

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.150045	0.001091	0.007268
Angelica arguta	0.015925	0	0
Apocynum androsaemifolium	0.000609	0	0
Calochortus subalpinus	0.000203	0	0
Carex sp.	0.000203	0	0
Cirsium callilepis	0.005442	0.307525	56.51061
Clarkia amoena	0.000152	0	0
Clintonia uniflora	0.000203	0	0
Erigeron aliceae & foliosus	0.010117	0.01145	1.131802
Erysimum asperum	0.00802	0	0
Lathyrus nevadensis	0.001293	0	0
Ligusticum grayi	0.50521	0.058888	0.116561
Montia siberica	0.000811	0	0
Orthocarpus imbricatus	0.034401	0.091058	2.646934
Phacelia hastata	0.006962	0.035442	5.090456
Rudbeckia occidentalis	0.004253	0.020174	4.74405
Rumex acetosella	0.015185	0	0
Senecio triangularis	0.000862	0.033806	39.20969
Stachys cooleyae	5.07E-05	0	0
Symporicarpos mollis	0.007176	0.019629	2.735248
Tiarella trifoliata	0.007597	0.000545	0.071776
Tolmiea menziesii	0.001014	0	0
Vancouveria hexandra	0.000203	0	0
Vicia americana	0.003198	0.019084	5.968065
Collinsia parviflora	0.001727	0	0
Delphinium nuttallianum	0.008828	0.34024	38.5407
Erythronium grandiflorum	5.07E-05	0	0
Fragaria virginiana	0.000507	0.001636	3.225312

Phlox gracilis	0.004775	0	0
Viola orbiculata	0.000406	0.000545	1.34388
Agoseris heterophylla	0.000715	0	0
Montia parvifolia	0.000578	0	0
Polemonium carneum	0.000396	0	0
Potentilla gracilis	0.001542	0	0
Rubus parviflorus	0.000609	0.001091	1.79184
Aster ledophyllum	0.001608	0.001636	1.017449
Lewisia triphylla	0.000456	0	0
Lomatium martindalei	0.026347	0	0
Mimulus guttatus	0.000101	0	0
Cerastium arvense	0.000101	0	0
Lupinus laxiflorus	0.001572	0.002181	1.387231
Mimulus tilingii	5.07E-05	0.001091	21.50208
Aquilegia formosa	0.000279	0	0
Perideridia gairdneri	0.000152	0	0
Eriophyllum lanatum	5.07E-05	0	0
Mimulus moschatus	0.000152	0	0
Drymocallis glandulosa	0.000152	0	0
Gayophytum humile	0.000913	0	0
Solidago canadensis	0.014454	0	0
Castilleja hispida	0.000355	0	0
Zigadenus venenosus	0.000811	0	0
Prunella vulgaris	0.000406	0.006543	16.12656
Eriogonum nudum	0.003516	0	0
Polygonum phytolaccaefolium	0.004666	0.002726	0.584296
Pachistima myrsinites	0.000254	0	0
Galium oreganum	0.000533	0	0
Valeriana scouleri	0.000279	0	0
Carex sp X	0.005528	0	0
Rainiera stricta	0.001116	0.006543	5.864205
Saxifraga occidentalis	0.00071	0	0
Eriogonum compositum	0.123084	0.037077	0.301237
Heracleum maximum	0.013085	0	0

Bombus mixtus CPM

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	7.88E-02	0	0.000

<i>Agoseris heterophylla</i>	2.26E-04	0	0.000
<i>Angelica arguta</i>	2.04E-01	0	0.000
<i>Aquilegia formosa</i>	2.28E-03	0.004257	1.863
<i>Calochortus subalpinus</i>	5.33E-04	0	0.000
<i>Carex</i> sp.	4.10E-05	0	0.000
<i>Castilleja hispida</i>	2.86E-03	0	0.000
<i>Chamerion angustifolium</i>	9.02E-04	0	0.000
<i>Cirsium callilepis</i>	3.83E-03	0.03874	10.123
<i>Delphinium nuttallianum</i>	8.35E-03	0.087271	10.453
<i>Erigeron aliceae & foliosus</i>	1.09E-02	0.0149	1.373
<i>Eriophyllum lanatum</i>	4.53E-03	0.005534	1.221
<i>Ligusticum grayi</i>	3.98E-01	0.093657	0.236
<i>Lilium pardalinum</i>	4.31E-04	0	0.000
<i>Lupinus laxiflorus</i>	5.39E-03	0.049383	9.163
<i>Mimulus moschatus & guttatus</i>	4.92E-04	0	0.000
<i>Montia parvifolia</i>	2.51E-03	0.003831	1.529
<i>Orthocarpus imbricatus</i>	2.25E-02	0.32567	14.494
<i>Phacelia hastata</i>	6.26E-03	0.135802	21.694
<i>Prunella vulgaris</i>	8.27E-03	0.021711	2.626
<i>Rainiera stricta</i>	2.67E-03	0.000851	0.319
<i>Rumex acetosella</i>	3.18E-02	0.0298	0.938
<i>Solidago canadensis</i>	1.58E-02	0.004683	0.296
<i>Stachys cooleyae</i>	2.85E-03	0.006811	2.390

<i>Vicia americana</i>	2.45E-03	0.000426	0.174
<i>Mimulus breweri</i>	1.75E-03	0	0.000
<i>Collinsia parviflora</i>	2.55E-03	0	0.000
<i>Phlox gracilis</i>	1.33E-02	0	0.000
<i>Viola orbiculata</i>	8.20E-05	0	0.000
<i>Penstemon procerus</i>	8.96E-03	0.15496	17.291
<i>Polemonium carneum</i>	3.81E-04	0	0.000
<i>Mimulus guttatus</i>	1.79E-03	0.004257	2.376
<i>Mimulus tilingii</i>	2.11E-03	0.002129	1.010
<i>Allium amplectens</i>	1.03E-04	0	0.000
<i>Aster ledophyllum</i>	2.13E-04	0.00596	27.953
<i>Epilobium oregonense</i>	2.87E-04	0	0.000
<i>Iris chrysophylla</i>	4.10E-05	0	0.000
<i>Phlox diffusa</i>	9.84E-05	0	0.000
<i>Anaphalis margaritacea</i>	1.16E-02	0	0.000
<i>Fragaria virginiana</i>	4.10E-05	0	0.000
<i>Rubus parviflorus</i>	2.46E-04	0.002129	8.652
<i>Gayophytum humile</i>	2.58E-03	0	0.000
<i>Rudbeckia occidentalis</i>	2.46E-04	0	0.000
<i>Lomatium martindalei</i>	2.30E-02	0	0.000
<i>Potentilla gracilis</i>	2.26E-04	0	0.000
<i>Smilacina racemosa</i>	6.15E-04	0.000426	0.692
<i>Carex sp X</i>	2.05E-04	0	0.000

Drymocallis glandulosa	2.07E-03	0.000851	0.412
Navarretia divaricata	1.44E-04	0	0.000
Mimulus moschatus	9.36E-04	0	0.000
Senecio integerrimus	6.56E-04	0	0.000
Osmorhiza sp X	7.26E-04	0	0.000
Rosa gymnocarpa	8.20E-05	0.000426	5.191
Zigadenus venenosus	6.03E-03	0	0.000
Eriogonum umbellatum	1.75E-02	0	0.000
Epilobium angustifolium	2.50E-03	0.000851	0.340
Erysimum asperum	2.05E-04	0	0.000
Galium oreganum	1.48E-03	0	0.000
Clarkia amoena	2.87E-04	0	0.000
Perideridia gairdneri	3.36E-03	0	0.000
Platanthera dilatata	4.10E-04	0	0.000
Penstemon cardwellii	5.74E-04	0	0.000
Eriogonum compositum	4.58E-02	0.004683	0.102
Eriogonum nudum	2.26E-03	0	0.000
Holodiscus dumosus	2.87E-02	0	0.000

Bombus mixtus CPR

Flw Spp	Flw Prop	Int Prop	Pref Score
Castilleja hispida	0.054081	0	0
Montia parvifolia	0.011468	0	0
Penstemon cardwellii	0.060357	0.085768	1.421003
Sedum oreganum	0.461851	0.512724	1.11015
Arctostaphylos nevadensis	0.003385	0	0

<i>Collinsia parviflora</i>	0.015742	0	0
<i>Delphinium nuttallianum</i>	0.035757	0.260132	7.274902
<i>Phlox gracilis</i>	0.050777	0	0
<i>Arenaria macrophylla</i>	0.005755	0.005655	0.982623
<i>Calochortus subalpinus</i>	0.013209	0	0
<i>Iris chrysophylla</i>	0.004486	0	0
<i>Mimulus breweri</i>	0.012166	0	0
<i>Penstemon procerus</i>	0.071896	0.099906	1.389592
<i>Silene douglasii</i>	0.000423	0.002828	6.681839
<i>Epilobium oregonense</i>	0.000846	0	0
<i>Polygonum minimum</i>	0.000423	0	0
<i>Lupinus laxiflorus</i>	0.042105	0.02639	0.626772
<i>Gayophytum humile</i>	0.000846	0	0
<i>Claytonia lanceolata</i>	0.001989	0	0
<i>Mimulus moschatus</i>	0.000423	0	0
<i>Vicia americana</i>	0.001269	0.002828	2.22728
<i>Erigeron aliceae & foliosus</i>	0.000423	0	0
<i>Phlox diffusa</i>	0.000508	0	0
<i>Zigadenus venenosus</i>	0.023909	0	0
<i>Dicentra uniflora</i>	0.003301	0	0
<i>Eriophyllum lanatum</i>	0.002116	0	0
<i>Erysimum asperum</i>	0.000846	0.001885	2.22728
<i>Amelanchier alnifolia</i>	0.002708	0.001885	0.696025
<i>Hypericum perforatum</i>	0.002116	0	0
<i>Carex sp X</i>	0.015234	0	0
<i>Holodiscus dumosus</i>	0.052896	0	0
<i>Achillea millefolium</i>	0.046689	0	0

Bombus mixtus CPS

Flw Spp	Flw Prop	Int Prop	Pref Score
<i>Achillea millefolium</i>	0.387616	0.000421	0.001086
<i>Castilleja hispida</i>	0.037928	0	0
<i>Erigeron aliceae & foliosus</i>	0.005725	0.000421	0.07355
<i>Hypericum perforatum</i>	0.006368	0.301053	47.27754
<i>Ligusticum grayi</i>	0.036988	0	0
<i>Lupinus laxiflorus</i>	0.010469	0	0
<i>Phacelia hastata</i>	0.015444	0.002947	0.190848
<i>Rumex acetosella</i>	0.046795	0	0
<i>Sedum oreganum</i>	0.129782	0.633263	4.879446
<i>Silene douglasii</i>	0.005073	0	0

Amelanchier alnifolia	0.01706	0	0
Arenaria macrophylla	0.000679	0	0
Calochortus subalpinus	0.005497	0	0
Collinsia parviflora	0.000679	0	0
Comandra umbellata	0.008433	0	0
Fragaria virginiana	0.002358	0	0
Phlox gracilis	0.019385	0	0
Penstemon cardwellii	0.021989	0.008	0.363811
Drymocallis glandulosa	0.008416	0.001684	0.200127
Rosa gymnocarpa	0.002036	0.000842	0.413596
Cirsium callilepis	0.00492	0.025263	5.134293
Eriophyllum lanatum	0.000509	0	0
Penstemon procerus	0.011215	0.017263	1.539252
Aster ledophyllus	0.001527	0	0
Polygonum minimum	0.00017	0	0
Agoseris heterophylla	0.00017	0.008842	52.11308
Phlox diffusa	0.000899	0	0
Arctostaphylos nevadensis	0.001561	0	0
Vaccinium alaskaense	0.000339	0	0
Vicia americana	0.001527	0	0
Saxifraga occidentalis	0.0047	0	0
Potentilla gracilis	0.001357	0	0
Gilia capitata	0.000509	0	0
Claytonia lanceolata	0.000679	0	0
Lomatium martindalei	0.107724	0	0
Pachistima myrsinites	0.001001	0	0
Anaphalis margaritacea	0.003563	0	0
Eriogonum umbellatum	0.00492	0	0
Sorbus sitchensis	0.025451	0	0
Eriogonum compositum	0.058537	0	0

Bombus mixtus M2

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.58E-01	0.017138	0.108
Angelica arguta	1.42E-01	0	0.000
Aquilegia formosa	6.30E-03	0.005998	0.952
Carex sp.	3.27E-05	0	0.000

<i>Castilleja hispida</i>	1.55E-03	0	0.000
<i>Cerastium arvense</i>	2.76E-04	0	0.000
<i>Cirsium callilepis</i>	4.84E-03	0.065124	13.467
<i>Delphinium nuttallianum</i>	9.21E-03	0.19623	21.314
<i>Erigeron aliceae & foliosus</i>	5.76E-03	0.041131	7.143
<i>Eriogonum nudum</i>	1.62E-03	0	0.000
<i>Eriophyllum lanatum</i>	1.98E-02	0.015424	0.780
<i>Erysimum asperum</i>	1.13E-02	0.005141	0.456
<i>Gayophytum humile</i>	2.04E-03	0	0.000
<i>Gilia capitata</i>	1.13E-02	0.028278	2.512
<i>Lathyrus nevadensis</i>	2.78E-04	0	0.000
<i>Ligusticum grayi</i>	3.65E-01	0.017138	0.047
<i>Lupinus laxiflorus</i>	1.33E-02	0.092545	6.961
<i>Mimulus moschatus & guttatus</i>	1.47E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.13E-02	0.357326	11.409
<i>Phacelia hastata</i>	1.06E-02	0.051414	4.865
<i>Phlox gracilis</i>	5.82E-03	0.000857	0.147
<i>Polemonium carneum</i>	4.48E-04	0	0.000
<i>Potentilla gracilis</i>	1.04E-02	0.039417	3.783
<i>Rumex acetosella</i>	6.76E-02	0.001714	0.025
<i>Silene douglasii</i>	4.90E-05	0	0.000
<i>Solidago canadensis</i>	1.12E-02	0.000857	0.077
<i>Symphoricarpos mollis</i>	2.71E-03	0.005141	1.894

<i>Vicia americana</i>	3.90E-03	0.046272	11.875
<i>Arenaria capillaris</i>	2.80E-04	0	0.000
<i>Collinsia parviflora</i>	2.82E-03	0	0.000
<i>Mimulus guttatus</i>	2.98E-04	0.001714	5.760
<i>Mimulus breweri</i>	1.23E-03	0	0.000
<i>Mimulus tilingii</i>	1.02E-03	0	0.000
<i>Sagina saginoides</i>	3.27E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.04E-03	0.002571	2.465
<i>Aster ledophyllus</i>	4.25E-04	0.000857	2.016
<i>Agoseris aurantiaca</i>	3.27E-05	0	0.000
<i>Phlox diffusa</i>	3.27E-05	0	0.000
<i>Stellaria crispa</i>	2.65E-04	0	0.000
<i>Lotus micranthus</i>	5.26E-04	0	0.000
<i>Navarretia divaricata</i>	1.43E-03	0	0.000
<i>Polygonum minimum</i>	1.96E-04	0	0.000
<i>Campanula scouleri</i>	3.27E-05	0	0.000
<i>Perideridia gairdneri</i>	1.91E-02	0	0.000
<i>Barbarea orthoceras</i>	5.89E-04	0	0.000
<i>Eriogonum umbellatum</i>	1.29E-03	0	0.000
<i>Mimulus moschatus</i>	6.87E-05	0	0.000
<i>Lithophragma parviflora</i>	6.54E-05	0	0.000
<i>Lewisia triphylla</i>	6.87E-05	0	0.000
<i>Polygonum douglasii</i>	7.62E-05	0	0.000

Lomatium martindalei	5.72E-03	0	0.000
Eriogonum compositum	6.50E-02	0.007712	0.119
Holodiscus dumosus	6.18E-04	0	0.000
Saxifraga occidentalis	1.62E-03	0	0.000

Bombus mixtus NE

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.072781	0	0
Agoseris heterophylla	0.000991	0	0
Anaphalis margaritacea	0.029046	0	0
Calochortus subalpinus	0.00085	0	0
Carex sp.	0.000142	0	0
Castilleja hispida	0.023185	0.004644	0.200297
Cirsium callilepis	0.016073	0.094427	5.874731
Collinsia parviflora	0.004957	0	0
Delphinium nuttallianum	0.002832	0.029412	10.38431
Erigeron aliceae & foliosus	0.0109	0	0
Eriogonum nudum	0.001275	0	0
Eriogonum umbellatum	0.059351	0.004644	0.078245
Eriophyllum lanatum	0.049995	0.004644	0.092889
Erysimum asperum	0.016923	0	0
Gilia capitata	0.010791	0	0
Ligusticum grayi	0.388171	0	0
Lupinus laxiflorus	0.029325	0.003096	0.105576
Orthocarpus imbricatus	0.067459	0.527864	7.824961
Phacelia hastata	0.018941	0.30805	16.26347
Phlox gracilis	0.00337	0	0
Rumex acetosella	0.032134	0	0
Gayophytum humile	0.000566	0	0
Mimulus breweri	0.001275	0	0
Potentilla gracilis	0.002124	0.001548	0.728724
Aster ledophyllum	0.000283	0	0
Drymocallis glandulosa	0.001119	0	0
Dodecatheon alpinum	0.000283	0	0
Vicia americana	0.000283	0	0
Penstemon procerus	0.005452	0.012384	2.271346
Campanula scouleri	0.000283	0	0

Galium oreganum	0.001629	0	0
Penstemon cardwellii	0.000708	0	0
Eriogonum compositum	0.056717	0.001548	0.027293
Lomatium martindalei	0.009417	0	0
Sedum spathulifolium	0.000991	0	0
Epilobium oregonense	0.001133	0	0
Barbarea orthoceras	0.002053	0	0
Holodiscus dumosus	0.07619	0.00774	0.101588

Bombus mixtus RP1

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.58E-01	0.013123	0.037
Agoseris heterophylla	7.61E-03	0.002625	0.345
Angelica arguta	2.39E-04	0	0.000
Calochortus subalpinus	2.79E-03	0	0.000
Castilleja hispida	6.03E-02	0	0.000
Cerastium arvense	2.11E-03	0	0.000
Cirsium callilepis	3.98E-04	0	0.000
Clarkia amoena	2.12E-03	0	0.000
Eriogonum compositum	8.89E-02	0.026247	0.295
Eriogonum nudum	9.83E-02	0.010499	0.107
Eriogonum umbellatum	5.81E-02	0	0.000
Eriophyllum lanatum	3.45E-02	0.044619	1.294
Gilia capitata	4.23E-02	0.144357	3.410
Lupinus laxiflorus	3.15E-02	0.12336	3.914
Orthocarpus imbricatus	1.21E-02	0.199475	16.538
Rumex acetosella	5.84E-02	0.002625	0.045

<i>Vicia americana</i>	2.53E-03	0.005249	2.075
<i>Lithophragma tenellum</i>	2.94E-04	0	0.000
<i>Arenaria capillaris</i>	4.33E-03	0	0.000
<i>Penstemon procerus</i>	6.92E-03	0.002625	0.379
<i>Phlox gracilis</i>	1.11E-02	0	0.000
<i>Collinsia parviflora</i>	2.23E-03	0	0.000
<i>Gayophytum humile</i>	2.08E-03	0	0.000
<i>Lathyrus nevadensis</i>	6.05E-04	0	0.000
<i>Mimulus guttatus</i>	7.96E-05	0	0.000
<i>Navarretia divaricata</i>	1.89E-03	0	0.000
<i>Stellaria crispa</i>	9.55E-04	0	0.000
<i>Mimulus breweri</i>	3.23E-03	0	0.000
<i>Hypericum perforatum</i>	1.21E-02	0.404199	33.342
<i>Epilobium oregonense</i>	6.21E-04	0	0.000
<i>Galium aparine</i>	7.96E-05	0	0.000
<i>Acmispon nevadensis</i>	7.15E-03	0.013123	1.835
<i>Senecio integerrimus</i>	7.96E-05	0	0.000
<i>Delphinium nuttallianum</i>	9.15E-04	0.005249	5.737
<i>Phlox diffusa</i>	4.85E-04	0	0.000
<i>Erysimum asperum</i>	1.28E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.57E-04	0	0.000
<i>Ranunculus uncinatus</i>	3.18E-04	0.002625	8.247
<i>Madia minima</i>	1.62E-03	0	0.000

Polygonum minimum	2.39E-04	0	0.000
Zigadenus venenosus	3.93E-03	0	0.000
Comandra umbellata	3.18E-04	0	0.000
Lotus micranthus	9.55E-04	0	0.000
Phacelia hastata	4.77E-04	0	0.000
Potentilla gracilis	4.77E-04	0	0.000
Lomatium martindalei	2.17E-02	0	0.000
Lomatium triternatum	3.58E-02	0	0.000
Ligusticum grayi	1.24E-02	0	0.000
Saxifraga occidentalis	1.99E-03	0	0.000
Anaphalis margaritacea	2.39E-03	0	0.000

Bombus mixtus RP2

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.19E-01	0	0.000
Acmispon nevadensis	1.31E-02	0.004405	0.337
Calochortus subalpinus	1.76E-03	0	0.000
Castilleja hispida	4.24E-02	0.004405	0.104
Cirsium callilepis	1.72E-03	0.004405	2.556
Collinsia parviflora	2.24E-03	0	0.000
Eriogonum nudum	1.40E-01	0.013216	0.094
Eriogonum umbellatum	1.77E-01	0.008811	0.050
Eriophyllum lanatum	2.55E-02	0.017621	0.691
Erysimum asperum	1.45E-03	0	0.000

<i>Gilia capitata</i>	2.50E-02	0.088106	3.520
<i>Hypericum perforatum</i>	5.83E-03	0.449339	77.103
<i>Lupinus laxiflorus</i>	2.57E-02	0.295154	11.496
<i>Orthocarpus imbricatus</i>	1.29E-03	0	0.000
<i>Penstemon procerus</i>	8.62E-04	0	0.000
<i>Rumex acetosella</i>	3.05E-02	0.013216	0.433
<i>Silene douglasii</i>	8.01E-03	0	0.000
<i>Agoseris heterophylla</i>	3.08E-03	0	0.000
<i>Arenaria capillaris</i>	1.04E-03	0	0.000
<i>Arenaria macrophylla</i>	1.46E-04	0	0.000
<i>Phlox gracilis</i>	1.03E-02	0	0.000
<i>Viola orbiculata</i>	6.63E-05	0	0.000
<i>Clarkia amoena</i>	2.01E-03	0.008811	4.387
<i>Rosa gymnocarpa</i>	6.63E-05	0	0.000
<i>Vicia americana</i>	1.15E-03	0.035242	30.736
<i>Gayophytum humile</i>	3.65E-04	0	0.000
<i>Mimulus breweri</i>	8.68E-04	0	0.000
<i>Epilobium angustifolium</i>	6.63E-05	0	0.000
<i>Delphinium nuttallianum</i>	4.97E-04	0.030837	62.036
<i>Navarretia divaricata</i>	3.98E-04	0	0.000
<i>Symphoricarpos mollis</i>	5.47E-03	0	0.000
<i>Aster ledophyllum</i>	1.33E-04	0	0.000
<i>Haplopappus hallii</i>	6.63E-05	0	0.000

Cerastium arvense	6.63E-05	0	0.000
Drymocallis glandulosa	1.99E-04	0	0.000
Epilobium oregonense	2.65E-04	0	0.000
Lathyrus nevadensis	3.31E-04	0.013216	39.880
Polygonum douglasii	9.94E-05	0	0.000
Zigadenus venenosus	3.43E-03	0	0.000
Eriogonum compositum	2.17E-01	0.013216	0.061
Lomatium triternatum	1.12E-02	0	0.000
Anaphalis margaritacea	2.25E-03	0	0.000
Lomatium martindalei	3.08E-03	0	0.000
Ribes viscosissimum	9.28E-04	0	0.000
Ligusticum grayi	9.68E-03	0	0.000
Phlox diffusa	3.98E-03	0	0.000

***Bombus mixtus* LM**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.22E-01	0.019305	0.060
Calochortus subalpinus	2.03E-03	0	0.000
Carex sp.	2.03E-04	0	0.000
Castilleja hispida	3.70E-02	0.032175	0.870
Cirsium callilepis	4.07E-04	0	0.000
Claytonia lanceolata	4.07E-04	0	0.000
Collinsia parviflora	4.00E-03	0	0.000
Delphinium nuttallianum	8.99E-03	0.120978	13.455

<i>Erigeron aliceae & foliosus</i>	3.43E-03	0	0.000
<i>Eriophyllum lanatum</i>	2.36E-02	0.043758	1.854
<i>Lathyrus nevadensis</i>	3.15E-03	0.011583	3.682
<i>Ligusticum grayi</i>	1.33E-01	0.002574	0.019
<i>Mimulus moschatus & guttatus</i>	5.99E-04	0	0.000
<i>Montia parvifolia</i>	5.06E-03	0	0.000
<i>Montia siberica</i>	4.07E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.99E-02	0.280566	7.028
<i>Orthocarpus imbricatus</i>	6.78E-05	0	0.000
<i>Penstemon procerus</i>	1.82E-02	0.024453	1.340
<i>Phlox gracilis</i>	2.02E-02	0	0.000
<i>Potentilla gracilis</i>	2.29E-02	0.019305	0.843
<i>Rumex acetosella</i>	1.92E-02	0	0.000
<i>Sedum stenopetalum</i>	1.36E-04	0	0.000
<i>Solidago canadensis</i>	4.75E-02	0.032175	0.678
<i>Vicia americana</i>	5.75E-03	0.015444	2.686
<i>Mimulus guttatus</i>	8.32E-03	0.142857	17.180
<i>Mimulus breweri</i>	5.31E-03	0.001287	0.242
<i>Drymocallis glandulosa</i>	1.22E-02	0.123552	10.109
<i>Arenaria capillaris</i>	8.81E-04	0	0.000
<i>Epilobium oregonense</i>	3.17E-03	0	0.000
<i>Mimulus tilingii</i>	5.06E-03	0.002574	0.509
<i>Convolvulus nyctagineus</i>	6.78E-05	0	0.000

<i>Cerastium arvense</i>	2.71E-04	0	0.000
<i>Saxifraga occidentalis</i>	6.78E-05	0	0.000
<i>Platanthera dilatata</i>	6.78E-05	0	0.000
<i>Lewisia triphylla</i>	1.36E-04	0	0.000
<i>Mimulus moschatus</i>	2.32E-03	0	0.000
<i>Erysimum asperum</i>	2.71E-04	0	0.000
<i>Gayophytum humile</i>	7.46E-05	0	0.000
<i>Aquilegia formosa</i>	5.02E-04	0	0.000
<i>Lupinus laxiflorus</i>	1.97E-02	0.072072	3.667
<i>Symphoricarpos mollis</i>	2.03E-04	0	0.000
<i>Angelica arguta</i>	8.64E-02	0.001287	0.015
<i>Hypericum perforatum</i>	2.03E-04	0	0.000
<i>Zigadenus venenosus</i>	2.84E-02	0	0.000
<i>Perideridia gairdneri</i>	5.12E-02	0.032175	0.629
<i>Stachys cooleyae</i>	3.39E-04	0	0.000
<i>Boykinia major</i>	3.39E-04	0	0.000
<i>Senecio triangularis</i>	6.78E-04	0.006435	9.492
<i>Polemonium carneum</i>	1.73E-03	0	0.000
<i>Saxifraga oregana</i>	1.23E-02	0	0.000
<i>Comandra umbellata</i>	5.20E-04	0	0.000
<i>Eriogonum nudum</i>	5.42E-04	0	0.000
<i>Eriogonum compositum</i>	1.80E-02	0.015444	0.860
<i>Eriogonum umbellatum</i>	2.03E-02	0	0.000

Arenaria macrophylla	2.03E-03	0	0.000
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Bombus mixtus LB

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.022235	0	0
Boykinia major	0.324468	0.065217	0.200998
Carex sp.	0.013402	0	0
Castilleja hispida	0.000307	0	0
Dodecatheon jeffreyi	0.003536	0.004831	1.366148
Epilobium oregonense	0.002454	0	0
Eriophyllum lanatum	0.002607	0	0
Heracleum maximum	0.021468	0	0
Hypericum anagalloides	0.002046	0	0
Ligusticum grayi	0.359084	0.00161	0.004484
Lupinus laxiflorus	0.011961	0.049114	4.10621
Mimulus moschatus & guttatus	0.002147	0.00161	0.750081
Mitella pentandra	0.001635	0	0
Platanthera dilatata	0.010428	0	0
Scirpus sp.	0.002147	0	0
Senecio triangularis	0.042998	0.136876	3.183295
Solidago canadensis	0.02659	0	0
Stachys cooleyae	0.020999	0.004026	0.19171
Vicia americana	0.011072	0.008857	0.799947
Dodecatheon alpinum	0.023309	0.689211	29.56896
Mertensia bella	0.000613	0.000805	1.312641
Mimulus tilingii	0.006134	0.007246	1.181377
Phlox gracilis	0.000307	0	0
Prunella vulgaris	0.000307	0	0
Senecio integerrimus	0.00963	0.012882	1.337723
Mimulus moschatus	0.000859	0	0
Collinsia grandiflora	0.001472	0	0
Potentilla gracilis	0.001533	0	0
Mimulus guttatus	0.001874	0.016103	8.593394
Cerastium arvense	0.00092	0	0
Penstemon procerus	0.001227	0.00161	1.312641
Eriogonum umbellatum	0.004907	0	0
Angelica arguta	0.012268	0	0
Carex sp X	0.009201	0	0
Anaphalis margaritacea	0.022389	0	0

Perideridia gairdneri	0.021468	0	0
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Bombus mixtus LO

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.75E-01	0	0.000
Castilleja hispida	1.35E-02	0.000667	0.049
Cirsium callilepis	1.59E-03	0.014676	9.246
Collinsia parviflora	2.16E-03	0.012675	5.862
Delphinium nuttallianum	8.70E-04	0	0.000
Epilobium oregonense	1.44E-03	0	0.000
Erigeron aliceae & foliosus	3.51E-03	0.000667	0.190
Eriogonum compositum	1.84E-01	0	0.000
Eriogonum nudum	2.00E-01	0.006671	0.033
Eriogonum umbellatum	1.31E-01	0.002001	0.015
Eriophyllum lanatum	1.79E-02	0.00934	0.522
Fragaria virginiana	2.56E-04	0	0.000
Gayophytum humile	3.74E-03	0	0.000
Gilia capitata	3.51E-02	0.256838	7.307
Heracleum maximum	1.60E-03	0	0.000
Hypericum perforatum	3.98E-02	0.521681	13.104
Lathyrus nevadensis	1.15E-03	0	0.000
Lupinus laxiflorus	2.62E-02	0.060707	2.317
Lupinus laxiflorus	3.84E-04	0	0.000
Montia parvifolia	2.56E-04	0	0.000

Montia siberica	1.13E-03	0	0.000
Mycelis muralis	1.28E-04	0	0.000
Navarretia divaricata	1.38E-03	0	0.000
Penstemon cardwellii	1.28E-04	0	0.000
Phlox gracilis	5.62E-03	0	0.000
Potentilla gracilis	1.54E-03	0	0.000
Rumex acetosella	3.65E-02	0.004003	0.110
Tiarella trifoliata	5.12E-04	0	0.000
Vicia americana	2.30E-03	0.007338	3.185
Arenaria capillaris	1.41E-04	0	0.000
Calochortus subalpinus	1.02E-03	0	0.000
Drymocallis glandulosa	5.31E-03	0.000667	0.126
Agoseris heterophylla	5.06E-03	0.033356	6.588
Aster ledophyllum	8.26E-04	0.006671	8.079
Hieracium cynoglossoides	6.40E-05	0	0.000
Lithophragma parviflora	3.20E-04	0	0.000
Silene douglasii	3.20E-04	0	0.000
Mimulus breweri	5.44E-04	0	0.000
Dichelostemma congestum	1.43E-03	0	0.000
Galium oreganum	6.40E-05	0	0.000
Saxifraga occidentalis	4.90E-03	0	0.000
Boykinia major	6.40E-05	0	0.000
Campanula scouleri	4.48E-04	0.002001	4.467

Cerastium arvense	5.44E-04	0	0.000
Mimulus moschatus	6.40E-05	0	0.000
Taraxacum officinale	6.40E-05	0	0.000
Polemonium carneum	7.68E-05	0	0.000
Mimulus guttatus	9.60E-05	0	0.000
Sedum spathulifolium	1.02E-04	0	0.000
Penstemon procerus	1.69E-03	0	0.000
Stellaria crispa	1.33E-02	0	0.000
Lomatium martindalei	1.86E-02	0	0.000
Erysimum asperum	1.09E-03	0	0.000
Acmispon nevadensis	2.29E-03	0	0.000
Sibbaldia procumbens	5.14E-04	0	0.000
Circaeа alpina	7.04E-04	0	0.000
Senecio triangularis	3.20E-04	0.06004	187.605
Holodiscus dumosus	1.82E-02	0	0.000
Polygonum douglasii	3.84E-04	0	0.000
Zigadenus venenosus	2.08E-03	0	0.000
Anaphalis margaritacea	1.28E-03	0	0.000
Ligusticum grayi	2.93E-02	0	0.000

Bombus mixtus LS

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.35E-01	0	0.000
Acmispon nevadensis	2.66E-03	0	0.000

<i>Agoseris heterophylla</i>	5.54E-03	0.103704	18.726
<i>Calochortus subalpinus</i>	1.55E-03	0	0.000
<i>Castilleja hispida</i>	1.14E-02	0.018519	1.626
<i>Cerastium arvense</i>	1.03E-02	0	0.000
<i>Cirsium callilepis</i>	1.03E-03	0.092593	90.003
<i>Collinsia parviflora</i>	4.49E-03	0	0.000
<i>Dichelostemma congestum</i>	4.02E-03	0.003704	0.921
<i>Drymocallis glandulosa</i>	3.33E-03	0	0.000
<i>Eriogonum compositum</i>	2.24E-01	0.003704	0.017
<i>Eriogonum nudum</i>	9.69E-02	0	0.000
<i>Eriogonum umbellatum</i>	2.33E-01	0	0.000
<i>Eriophyllum lanatum</i>	1.88E-02	0	0.000
<i>Gilia capitata</i>	2.26E-02	0.355556	15.737
<i>Hypericum perforatum</i>	9.22E-03	0.051852	5.622
<i>Lathyrus nevadensis</i>	4.08E-04	0	0.000
<i>Lomatium martindalei</i>	2.31E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.43E-02	0.359259	14.801
<i>Mimulus breweri</i>	1.98E-03	0	0.000
<i>Mimulus moschatus & guttatus</i>	2.17E-04	0	0.000
<i>Montia parvifolia</i>	2.35E-04	0	0.000
<i>Phlox gracilis</i>	5.31E-03	0	0.000
<i>Potentilla gracilis</i>	1.10E-03	0	0.000
<i>Rumex acetosella</i>	1.12E-02	0	0.000

<i>Silene douglasii</i>	1.63E-04	0	0.000
<i>Vicia americana</i>	2.23E-03	0.011111	4.979
<i>Iris chrysophylla</i>	5.43E-05	0	0.000
<i>Mimulus tilingii</i>	2.41E-03	0	0.000
<i>Stellaria crispa</i>	9.13E-04	0	0.000
<i>Campanula scouleri</i>	5.43E-05	0	0.000
<i>Galium oreganum</i>	2.99E-04	0	0.000
<i>Ranunculus uncinatus</i>	5.43E-05	0	0.000
<i>Viola orbiculata</i>	2.45E-04	0	0.000
<i>Gayophytum humile</i>	4.62E-04	0	0.000
<i>Mimulus moschatus</i>	5.49E-04	0	0.000
<i>Taraxacum officinale</i>	5.43E-05	0	0.000
<i>Arenaria capillaris</i>	8.15E-05	0	0.000
<i>Delphinium nuttallianum</i>	1.09E-04	0	0.000
<i>Penstemon procerus</i>	7.79E-03	0	0.000
<i>Zigadenus venenosus</i>	1.85E-03	0	0.000
<i>Lomatium triternatum</i>	1.90E-04	0	0.000
<i>Penstemon cardwellii</i>	1.90E-04	0	0.000
<i>Navarretia divaricata</i>	5.43E-04	0	0.000
<i>Solidago canadensis</i>	5.43E-04	0	0.000
<i>Sedum spathulifolium</i>	5.43E-04	0	0.000
<i>Anaphalis margaritacea</i>	2.09E-02	0	0.000
<i>Ligusticum grayi</i>	2.13E-02	0	0.000

Erigeron aliceae & foliosus	8.15E-03	0	0.000
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***Bombylius major* CPB**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.150045	0	0
Angelica arguta	0.015925	0	0
Apocynum androsaemifolium	0.000609	0	0
Calochortus subalpinus	0.000203	0	0
Carex sp.	0.000203	0	0
Cirsium callilepis	0.005442	0	0
Clarkia amoena	0.000152	0	0
Clintonia uniflora	0.000203	0	0
Erigeron aliceae & foliosus	0.010117	0	0
Erysimum asperum	0.00802	0	0
Lathyrus nevadensis	0.001293	0	0
Ligusticum grayi	0.50521	0.047393	0.093809
Montia siberica	0.000811	0	0
Orthocarpus imbricatus	0.034401	0.009479	0.275533
Phacelia hastata	0.006962	0	0
Rudbeckia occidentalis	0.004253	0	0
Rumex acetosella	0.015185	0	0
Senecio triangularis	0.000862	0	0
Stachys cooleyae	5.07E-05	0	0
Symphoricarpos mollis	0.007176	0	0
Tiarella trifoliata	0.007597	0	0
Tolmiea menziesii	0.001014	0	0
Vancouveria hexandra	0.000203	0	0
Vicia americana	0.003198	0	0
Collinsia parviflora	0.001727	0	0
Delphinium nuttallianum	0.008828	0.843602	95.55905
Erythronium grandiflorum	5.07E-05	0	0
Fragaria virginiana	0.000507	0.004739	9.344743
Phlox gracilis	0.004775	0.028436	5.95568
Viola orbiculata	0.000406	0	0
Agoseris heterophylla	0.000715	0	0
Montia parvifolia	0.000578	0.066351	114.76
Polemonium carneum	0.000396	0	0
Potentilla gracilis	0.001542	0	0
Rubus parviflorus	0.000609	0	0

Aster ledophyllus	0.001608	0	0
Lewisia triphylla	0.000456	0	0
Lomatium martindalei	0.026347	0	0
Mimulus guttatus	0.000101	0	0
Cerastium arvense	0.000101	0	0
Lupinus laxiflorus	0.001572	0	0
Mimulus tilingii	5.07E-05	0	0
Aquilegia formosa	0.000279	0	0
Perideridia gairdneri	0.000152	0	0
Eriophyllum lanatum	5.07E-05	0	0
Mimulus moschatus	0.000152	0	0
Drymocallis glandulosa	0.000152	0	0
Gayophytum humile	0.000913	0	0
Solidago canadensis	0.014454	0	0
Castilleja hispida	0.000355	0	0
Zigadenus venenosus	0.000811	0	0
Prunella vulgaris	0.000406	0	0
Eriogonum nudum	0.003516	0	0
Polygonum phytolaccaefolium	0.004666	0	0
Pachistima myrsinites	0.000254	0	0
Galium oreganum	0.000533	0	0
Valeriana scouleri	0.000279	0	0
Carex sp X	0.005528	0	0
Rainiera stricta	0.001116	0	0
Saxifraga occidentalis	0.00071	0	0
Eriogonum compositum	0.123084	0	0
Heracleum maximum	0.013085	0	0

***Bombylius major* CPM**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	7.88E-02	0.005348	0.068
Agoseris heterophylla	2.26E-04	0	0.000
Angelica arguta	2.04E-01	0	0.000
Aquilegia formosa	2.28E-03	0	0.000
Calochortus subalpinus	5.33E-04	0	0.000

Carex sp.	4.10E-05	0	0.000
Castilleja hispida	2.86E-03	0	0.000
Chamerion angustifolium	9.02E-04	0	0.000
Cirsium callilepis	3.83E-03	0	0.000
Delphinium nuttallianum	8.35E-03	0.561497	67.255
Erigeron aliceae & foliosus	1.09E-02	0.010695	0.986
Eriophyllum lanatum	4.53E-03	0	0.000
Ligusticum grayi	3.98E-01	0.005348	0.013
Lilium pardalinum	4.31E-04	0	0.000
Lupinus laxiflorus	5.39E-03	0	0.000
Mimulus moschatus & guttatus	4.92E-04	0	0.000
Montia parvifolia	2.51E-03	0.016043	6.404
Orthocarpus imbricatus	2.25E-02	0	0.000
Phacelia hastata	6.26E-03	0	0.000
Prunella vulgaris	8.27E-03	0	0.000
Rainiera stricta	2.67E-03	0	0.000
Rumex acetosella	3.18E-02	0	0.000
Solidago canadensis	1.58E-02	0	0.000
Stachys cooleyae	2.85E-03	0	0.000
Vicia americana	2.45E-03	0	0.000
Mimulus breweri	1.75E-03	0	0.000
Collinsia parviflora	2.55E-03	0	0.000
Phlox gracilis	1.33E-02	0.010695	0.803

<i>Viola orbiculata</i>	8.20E-05	0	0.000
<i>Penstemon procerus</i>	8.96E-03	0.320856	35.801
<i>Polemonium carneum</i>	3.81E-04	0	0.000
<i>Mimulus guttatus</i>	1.79E-03	0.010695	5.969
<i>Mimulus tilingii</i>	2.11E-03	0.058824	27.911
<i>Allium amplectens</i>	1.03E-04	0	0.000
<i>Aster ledophyllus</i>	2.13E-04	0	0.000
<i>Epilobium oregonense</i>	2.87E-04	0	0.000
<i>Iris chrysophylla</i>	4.10E-05	0	0.000
<i>Phlox diffusa</i>	9.84E-05	0	0.000
<i>Anaphalis margaritacea</i>	1.16E-02	0	0.000
<i>Fragaria virginiana</i>	4.10E-05	0	0.000
<i>Rubus parviflorus</i>	2.46E-04	0	0.000
<i>Gayophytum humile</i>	2.58E-03	0	0.000
<i>Rudbeckia occidentalis</i>	2.46E-04	0	0.000
<i>Lomatium martindalei</i>	2.30E-02	0	0.000
<i>Potentilla gracilis</i>	2.26E-04	0	0.000
<i>Smilacina racemosa</i>	6.15E-04	0	0.000
<i>Carex sp X</i>	2.05E-04	0	0.000
<i>Drymocallis glandulosa</i>	2.07E-03	0	0.000
<i>Navarretia divaricata</i>	1.44E-04	0	0.000
<i>Mimulus moschatus</i>	9.36E-04	0	0.000
<i>Senecio integerrimus</i>	6.56E-04	0	0.000

Osmorhiza sp X	7.26E-04	0	0.000
Rosa gymnocarpa	8.20E-05	0	0.000
Zigadenus venenosus	6.03E-03	0	0.000
Eriogonum umbellatum	1.75E-02	0	0.000
Epilobium angustifolium	2.50E-03	0	0.000
Erysimum asperum	2.05E-04	0	0.000
Galium oreganum	1.48E-03	0	0.000
Clarkia amoena	2.87E-04	0	0.000
Perideridia gairdneri	3.36E-03	0	0.000
Platanthera dilatata	4.10E-04	0	0.000
Penstemon cardwellii	5.74E-04	0	0.000
Eriogonum compositum	4.58E-02	0	0.000
Eriogonum nudum	2.26E-03	0	0.000
Holodiscus dumosus	2.87E-02	0	0.000

***Bombylius major* CPR**

Flw Spp	Flw Prop	Int Prop	Pref Score
Castilleja hispida	0.054081	0	0
Montia parvifolia	0.011468	0.098837	8.618691
Penstemon cardwellii	0.060357	0.093023	1.541206
Sedum oreganum	0.461851	0.093023	0.201414
Arctostaphylos nevadensis	0.003385	0	0
Collinsia parviflora	0.015742	0	0
Delphinium nuttallianum	0.035757	0.354651	9.918245
Phlox gracilis	0.050777	0.005814	0.1145
Arenaria macrophylla	0.005755	0.005814	1.010236
Calochortus subalpinus	0.013209	0.040698	3.081104
Iris chrysophylla	0.004486	0	0
Mimulus breweri	0.012166	0	0

Penstemon procerus	0.071896	0.215116	2.992058
Silene douglasii	0.000423	0	0
Epilobium oregonense	0.000846	0	0
Polygonum minimum	0.000423	0	0
Lupinus laxiflorus	0.042105	0.011628	0.276165
Gayophytum humile	0.000846	0	0
Claytonia lanceolata	0.001989	0.081395	40.9253
Mimulus moschatus	0.000423	0	0
Vicia americana	0.001269	0	0
Erigeron aliceae & foliosus	0.000423	0	0
Phlox diffusa	0.000508	0	0
Zigadenus venenosus	0.023909	0	0
Dicentra uniflora	0.003301	0	0
Eriophyllum lanatum	0.002116	0	0
Erysimum asperum	0.000846	0	0
Amelanchier alnifolia	0.002708	0	0
Hypericum perforatum	0.002116	0	0
Carex sp X	0.015234	0	0
Holodiscus dumosus	0.052896	0	0
Achillea millefolium	0.046689	0	0

Bombylius major CPS

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.387616	0.155844	0.402058
Castilleja hispida	0.037928	0	0
Erigeron aliceae & foliosus	0.005725	0	0
Hypericum perforatum	0.006368	0	0
Ligusticum grayi	0.036988	0	0
Lupinus laxiflorus	0.010469	0.220779	21.08939
Phacelia hastata	0.015444	0	0
Rumex acetosella	0.046795	0	0
Sedum oreganum	0.129782	0.103896	0.800545
Silene douglasii	0.005073	0	0
Amelanchier alnifolia	0.01706	0	0
Arenaria macrophylla	0.000679	0	0
Calochortus subalpinus	0.005497	0	0
Collinsia parviflora	0.000679	0	0
Comandra umbellata	0.008433	0	0
Fragaria virginiana	0.002358	0	0
Phlox gracilis	0.019385	0	0

Penstemon cardwellii	0.021989	0.038961	1.771807
Drymocallis glandulosa	0.008416	0	0
Rosa gymnocarpa	0.002036	0	0
Cirsium callilepis	0.00492	0	0
Eriophyllum lanatum	0.000509	0	0
Penstemon procerus	0.011215	0.311688	27.79137
Aster ledophyllus	0.001527	0	0
Polygonum minimum	0.00017	0	0
Agoseris heterophylla	0.00017	0	0
Phlox diffusa	0.000899	0	0
Arctostaphylos nevadensis	0.001561	0.168831	108.1573
Vaccinium alaskaense	0.000339	0	0
Vicia americana	0.001527	0	0
Saxifraga occidentalis	0.0047	0	0
Potentilla gracilis	0.001357	0	0
Gilia capitata	0.000509	0	0
Claytonia lanceolata	0.000679	0	0
Lomatium martindalei	0.107724	0	0
Pachistima myrsinites	0.001001	0	0
Anaphalis margaritacea	0.003563	0	0
Eriogonum umbellatum	0.00492	0	0
Sorbus sitchensis	0.025451	0	0
Eriogonum compositum	0.058537	0	0

***Bombylius major* M2**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.58E-01	0	0.000
Angelica arguta	1.42E-01	0	0.000
Aquilegia formosa	6.30E-03	0	0.000
Carex sp.	3.27E-05	0	0.000
Castilleja hispida	1.55E-03	0	0.000
Cerastium arvense	2.76E-04	0.000564	2.047
Cirsium callilepis	4.84E-03	0	0.000

<i>Delphinium nuttallianum</i>	9.21E-03	0.005076	0.551
<i>Erigeron aliceae & foliosus</i>	5.76E-03	0	0.000
<i>Eriogonum nudum</i>	1.62E-03	0	0.000
<i>Eriophyllum lanatum</i>	1.98E-02	0	0.000
<i>Erysimum asperum</i>	1.13E-02	0	0.000
<i>Gayophytum humile</i>	2.04E-03	0	0.000
<i>Gilia capitata</i>	1.13E-02	0.967851	85.972
<i>Lathyrus nevadensis</i>	2.78E-04	0	0.000
<i>Ligusticum grayi</i>	3.65E-01	0	0.000
<i>Lupinus laxiflorus</i>	1.33E-02	0	0.000
<i>Mimulus moschatus & guttatus</i>	1.47E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.13E-02	0	0.000
<i>Phacelia hastata</i>	1.06E-02	0	0.000
<i>Phlox gracilis</i>	5.82E-03	0.004512	0.775
<i>Polemonium carneum</i>	4.48E-04	0	0.000
<i>Potentilla gracilis</i>	1.04E-02	0.000564	0.054
<i>Rumex acetosella</i>	6.76E-02	0	0.000
<i>Silene douglasii</i>	4.90E-05	0	0.000
<i>Solidago canadensis</i>	1.12E-02	0	0.000
<i>Symphoricarpos mollis</i>	2.71E-03	0	0.000
<i>Vicia americana</i>	3.90E-03	0.00846	2.171
<i>Arenaria capillaris</i>	2.80E-04	0	0.000
<i>Collinsia parviflora</i>	2.82E-03	0	0.000

<i>Mimulus guttatus</i>	2.98E-04	0	0.000
<i>Mimulus breweri</i>	1.23E-03	0.000564	0.459
<i>Mimulus tilingii</i>	1.02E-03	0.00282	2.764
<i>Sagina saginoides</i>	3.27E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.04E-03	0	0.000
<i>Aster ledophyllus</i>	4.25E-04	0	0.000
<i>Agoseris aurantiaca</i>	3.27E-05	0	0.000
<i>Phlox diffusa</i>	3.27E-05	0.002256	68.998
<i>Stellaria crispa</i>	2.65E-04	0.003384	12.777
<i>Lotus micranthus</i>	5.26E-04	0	0.000
<i>Navarretia divaricata</i>	1.43E-03	0.003948	2.763
<i>Polygonum minimum</i>	1.96E-04	0	0.000
<i>Campanula scouleri</i>	3.27E-05	0	0.000
<i>Perideridia gairdneri</i>	1.91E-02	0	0.000
<i>Barbarea orthoceras</i>	5.89E-04	0	0.000
<i>Eriogonum umbellatum</i>	1.29E-03	0	0.000
<i>Mimulus moschatus</i>	6.87E-05	0	0.000
<i>Lithophragma parviflora</i>	6.54E-05	0	0.000
<i>Lewisia triphylla</i>	6.87E-05	0	0.000
<i>Polygonum douglasii</i>	7.62E-05	0	0.000
<i>Lomatium martindalei</i>	5.72E-03	0	0.000
<i>Eriogonum compositum</i>	6.50E-02	0	0.000
<i>Holodiscus dumosus</i>	6.18E-04	0	0.000

Saxifraga occidentalis	1.62E-03	0	0.000
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***Bombylius major* NE**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.072781	0	0
Agoseris heterophylla	0.000991	0	0
Anaphalis margaritacea	0.029046	0	0
Calochortus subalpinus	0.00085	0	0
Carex sp.	0.000142	0	0
Castilleja hispida	0.023185	0	0
Cirsium callilepis	0.016073	0	0
Collinsia parviflora	0.004957	0.004831	0.974649
Delphinium nuttallianum	0.002832	0	0
Erigeron aliceae & foliosus	0.0109	0	0
Eriogonum nudum	0.001275	0	0
Eriogonum umbellatum	0.059351	0	0
Eriophyllum lanatum	0.049995	0.004831	0.096628
Erysimum asperum	0.016923	0	0
Gilia capitata	0.010791	0.78744	72.97075
Ligusticum grayi	0.388171	0	0
Lupinus laxiflorus	0.029325	0	0
Orthocarpus imbricatus	0.067459	0	0
Phacelia hastata	0.018941	0	0
Phlox gracilis	0.00337	0	0
Rumex acetosella	0.032134	0	0
Gayophytum humile	0.000566	0	0
Mimulus breweri	0.001275	0.024155	18.9515
Potentilla gracilis	0.002124	0	0
Aster ledophyllum	0.000283	0	0
Drymocallis glandulosa	0.001119	0	0
Dodecatheon alpinum	0.000283	0	0
Vicia americana	0.000283	0	0
Penstemon procerus	0.005452	0.178744	32.78364
Campanula scouleri	0.000283	0	0
Galium oreganum	0.001629	0	0
Penstemon cardwellii	0.000708	0	0
Eriogonum compositum	0.056717	0	0
Lomatium martindalei	0.009417	0	0
Sedum spathulifolium	0.000991	0	0

<i>Epilobium oregonense</i>	0.001133	0	0
<i>Barbarea orthoceras</i>	0.002053	0	0
<i>Holodiscus dumosus</i>	0.07619	0	0

***Bombylius major* RP1**

Flw Spp	Flw Prop	Int Prop	Pref Score
<i>Achillea millefolium</i>	3.58E-01	0	0.000
<i>Agoseris heterophylla</i>	7.61E-03	0	0.000
<i>Angelica arguta</i>	2.39E-04	0	0.000
<i>Calochortus subalpinus</i>	2.79E-03	0	0.000
<i>Castilleja hispida</i>	6.03E-02	0	0.000
<i>Cerastium arvense</i>	2.11E-03	0.0025	1.186
<i>Cirsium callilepis</i>	3.98E-04	0	0.000
<i>Clarkia amoena</i>	2.12E-03	0	0.000
<i>Eriogonum compositum</i>	8.89E-02	0	0.000
<i>Eriogonum nudum</i>	9.83E-02	0	0.000
<i>Eriogonum umbellatum</i>	5.81E-02	0	0.000
<i>Eriophyllum lanatum</i>	3.45E-02	0	0.000
<i>Gilia capitata</i>	4.23E-02	0.9875	23.330
<i>Lupinus laxiflorus</i>	3.15E-02	0	0.000
<i>Orthocarpus imbricatus</i>	1.21E-02	0	0.000
<i>Rumex acetosella</i>	5.84E-02	0	0.000
<i>Vicia americana</i>	2.53E-03	0	0.000
<i>Lithophragma tenellum</i>	2.94E-04	0	0.000
<i>Arenaria capillaris</i>	4.33E-03	0	0.000

<i>Penstemon procerus</i>	6.92E-03	0	0.000
<i>Phlox gracilis</i>	1.11E-02	0.0075	0.675
<i>Collinsia parviflora</i>	2.23E-03	0	0.000
<i>Gayophytum humile</i>	2.08E-03	0	0.000
<i>Lathyrus nevadensis</i>	6.05E-04	0	0.000
<i>Mimulus guttatus</i>	7.96E-05	0	0.000
<i>Navarretia divaricata</i>	1.89E-03	0	0.000
<i>Stellaria crispa</i>	9.55E-04	0.0025	2.618
<i>Mimulus breweri</i>	3.23E-03	0	0.000
<i>Hypericum perforatum</i>	1.21E-02	0	0.000
<i>Epilobium oregonense</i>	6.21E-04	0	0.000
<i>Galium aparine</i>	7.96E-05	0	0.000
<i>Acmispon nevadensis</i>	7.15E-03	0	0.000
<i>Senecio integerrimus</i>	7.96E-05	0	0.000
<i>Delphinium nuttallianum</i>	9.15E-04	0	0.000
<i>Phlox diffusa</i>	4.85E-04	0	0.000
<i>Erysimum asperum</i>	1.28E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.57E-04	0	0.000
<i>Ranunculus uncinatus</i>	3.18E-04	0	0.000
<i>Madia minima</i>	1.62E-03	0	0.000
<i>Polygonum minimum</i>	2.39E-04	0	0.000
<i>Zigadenus venenosus</i>	3.93E-03	0	0.000
<i>Comandra umbellata</i>	3.18E-04	0	0.000

<i>Lotus micranthus</i>	9.55E-04	0	0.000
<i>Phacelia hastata</i>	4.77E-04	0	0.000
<i>Potentilla gracilis</i>	4.77E-04	0	0.000
<i>Lomatium martindalei</i>	2.17E-02	0	0.000
<i>Lomatium triternatum</i>	3.58E-02	0	0.000
<i>Ligusticum grayi</i>	1.24E-02	0	0.000
<i>Saxifraga occidentalis</i>	1.99E-03	0	0.000
<i>Anaphalis margaritacea</i>	2.39E-03	0	0.000

***Bombylius major* RP2**

Flw Spp	Flw Prop	Int Prop	Pref Score
<i>Achillea millefolium</i>	2.19E-01	0	0.000
<i>Acmispon nevadensis</i>	1.31E-02	0	0.000
<i>Calochortus subalpinus</i>	1.76E-03	0	0.000
<i>Castilleja hispida</i>	4.24E-02	0	0.000
<i>Cirsium callilepis</i>	1.72E-03	0	0.000
<i>Collinsia parviflora</i>	2.24E-03	0	0.000
<i>Eriogonum nudum</i>	1.40E-01	0	0.000
<i>Eriogonum umbellatum</i>	1.77E-01	0.002703	0.015
<i>Eriophyllum lanatum</i>	2.55E-02	0.010811	0.424
<i>Erysimum asperum</i>	1.45E-03	0	0.000
<i>Gilia capitata</i>	2.50E-02	0.962162	38.444
<i>Hypericum perforatum</i>	5.83E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.57E-02	0	0.000

<i>Orthocarpus imbricatus</i>	1.29E-03	0	0.000
<i>Penstemon procerus</i>	8.62E-04	0	0.000
<i>Rumex acetosella</i>	3.05E-02	0	0.000
<i>Silene douglasii</i>	8.01E-03	0	0.000
<i>Agoseris heterophylla</i>	3.08E-03	0.016216	5.258
<i>Arenaria capillaris</i>	1.04E-03	0.008108	7.792
<i>Arenaria macrophylla</i>	1.46E-04	0	0.000
<i>Phlox gracilis</i>	1.03E-02	0	0.000
<i>Viola orbiculata</i>	6.63E-05	0	0.000
<i>Clarkia amoena</i>	2.01E-03	0	0.000
<i>Rosa gymnocarpa</i>	6.63E-05	0	0.000
<i>Vicia americana</i>	1.15E-03	0	0.000
<i>Gayophytum humile</i>	3.65E-04	0	0.000
<i>Mimulus breweri</i>	8.68E-04	0	0.000
<i>Epilobium angustifolium</i>	6.63E-05	0	0.000
<i>Delphinium nuttallianum</i>	4.97E-04	0	0.000
<i>Navarretia divaricata</i>	3.98E-04	0	0.000
<i>Symphoricarpos mollis</i>	5.47E-03	0	0.000
<i>Aster ledophyllum</i>	1.33E-04	0	0.000
<i>Haplopappus hallii</i>	6.63E-05	0	0.000
<i>Cerastium arvense</i>	6.63E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.99E-04	0	0.000
<i>Epilobium oregonense</i>	2.65E-04	0	0.000

Lathyrus nevadensis	3.31E-04	0	0.000
Polygonum douglasii	9.94E-05	0	0.000
Zigadenus venenosus	3.43E-03	0	0.000
Eriogonum compositum	2.17E-01	0	0.000
Lomatium triternatum	1.12E-02	0	0.000
Anaphalis margaritacea	2.25E-03	0	0.000
Lomatium martindalei	3.08E-03	0	0.000
Ribes viscosissimum	9.28E-04	0	0.000
Ligusticum grayi	9.68E-03	0	0.000
Phlox diffusa	3.98E-03	0	0.000

***Bombylius major* LM**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.22E-01	0	0.000
Calochortus subalpinus	2.03E-03	0	0.000
Carex sp.	2.03E-04	0	0.000
Castilleja hispida	3.70E-02	0	0.000
Cirsium callilepis	4.07E-04	0	0.000
Claytonia lanceolata	4.07E-04	0.071429	175.610
Collinsia parviflora	4.00E-03	0	0.000
Delphinium nuttallianum	8.99E-03	0.178571	19.861
Erigeron aliceae & foliosus	3.43E-03	0	0.000
Eriophyllum lanatum	2.36E-02	0.178571	7.567
Lathyrus nevadensis	3.15E-03	0	0.000

<i>Ligusticum grayi</i>	1.33E-01	0.035714	0.268
<i>Mimulus moschatus & guttatus</i>	5.99E-04	0	0.000
<i>Montia parvifolia</i>	5.06E-03	0.035714	7.062
<i>Montia siberica</i>	4.07E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.99E-02	0.035714	0.895
<i>Orthocarpus imbricatus</i>	6.78E-05	0	0.000
<i>Penstemon procerus</i>	1.82E-02	0.25	13.701
<i>Phlox gracilis</i>	2.02E-02	0	0.000
<i>Potentilla gracilis</i>	2.29E-02	0.035714	1.560
<i>Rumex acetosella</i>	1.92E-02	0	0.000
<i>Sedum stenopetalum</i>	1.36E-04	0	0.000
<i>Solidago canadensis</i>	4.75E-02	0	0.000
<i>Vicia americana</i>	5.75E-03	0	0.000
<i>Mimulus guttatus</i>	8.32E-03	0.107143	12.885
<i>Mimulus breweri</i>	5.31E-03	0	0.000
<i>Drymocallis glandulosa</i>	1.22E-02	0	0.000
<i>Arenaria capillaris</i>	8.81E-04	0	0.000
<i>Epilobium oregonense</i>	3.17E-03	0	0.000
<i>Mimulus tilingii</i>	5.06E-03	0.071429	14.124
<i>Convolvulus nyctagineus</i>	6.78E-05	0	0.000
<i>Cerastium arvense</i>	2.71E-04	0	0.000
<i>Saxifraga occidentalis</i>	6.78E-05	0	0.000
<i>Platanthera dilatata</i>	6.78E-05	0	0.000

Lewisia triphylla	1.36E-04	0	0.000
Mimulus moschatus	2.32E-03	0	0.000
Erysimum asperum	2.71E-04	0	0.000
Gayophytum humile	7.46E-05	0	0.000
Aquilegia formosa	5.02E-04	0	0.000
Lupinus laxiflorus	1.97E-02	0	0.000
Symphoricarpos mollis	2.03E-04	0	0.000
Angelica arguta	8.64E-02	0	0.000
Hypericum perforatum	2.03E-04	0	0.000
Zigadenus venenosus	2.84E-02	0	0.000
Perideridia gairdneri	5.12E-02	0	0.000
Stachys cooleyae	3.39E-04	0	0.000
Boykinia major	3.39E-04	0	0.000
Senecio triangularis	6.78E-04	0	0.000
Polemonium carneum	1.73E-03	0	0.000
Saxifraga oregana	1.23E-02	0	0.000
Comandra umbellata	5.20E-04	0	0.000
Eriogonum nudum	5.42E-04	0	0.000
Eriogonum compositum	1.80E-02	0	0.000
Eriogonum umbellatum	2.03E-02	0	0.000
Arenaria macrophylla	2.03E-03	0	0.000

***Bombylius major* LB**

Flw Spp	Flw Prop	Int Prop	Pref Score

Achillea millefolium	0.022235	0	0
Boykinia major	0.324468	0.25	0.770492
Carex sp.	0.013402	0	0
Castilleja hispida	0.000307	0	0
Dodecatheon jeffreyi	0.003536	0	0
Epilobium oregonense	0.002454	0	0
Eriophyllum lanatum	0.002607	0	0
Heracleum maximum	0.021468	0	0
Hypericum anagalloides	0.002046	0	0
Ligusticum grayi	0.359084	0	0
Lupinus laxiflorus	0.011961	0	0
Mimulus moschatus & guttatus	0.002147	0	0
Mitella pentandra	0.001635	0	0
Platanthera dilatata	0.010428	0	0
Scirpus sp.	0.002147	0	0
Senecio triangularis	0.042998	0	0
Solidago canadensis	0.02659	0	0
Stachys cooleyae	0.020999	0	0
Vicia americana	0.011072	0	0
Dodecatheon alpinum	0.023309	0	0
Mertensia bella	0.000613	0	0
Mimulus tilingii	0.006134	0	0
Phlox gracilis	0.000307	0	0
Prunella vulgaris	0.000307	0	0
Senecio integerrimus	0.00963	0.75	77.88057
Mimulus moschatus	0.000859	0	0
Collinsia grandiflora	0.001472	0	0
Potentilla gracilis	0.001533	0	0
Mimulus guttatus	0.001874	0	0
Cerastium arvense	0.00092	0	0
Penstemon procerus	0.001227	0	0
Eriogonum umbellatum	0.004907	0	0
Angelica arguta	0.012268	0	0
Carex sp X	0.009201	0	0
Anaphalis margaritacea	0.022389	0	0
Perideridia gairdneri	0.021468	0	0

Bombylius major LO

Flw Spp	Flw Prop	Int Prop	Pref Score

<i>Achillea millefolium</i>	1.75E-01	0	0.000
<i>Castilleja hispida</i>	1.35E-02	0	0.000
<i>Cirsium callilepis</i>	1.59E-03	0	0.000
<i>Collinsia parviflora</i>	2.16E-03	0	0.000
<i>Delphinium nuttallianum</i>	8.70E-04	0	0.000
<i>Epilobium oregonense</i>	1.44E-03	0	0.000
<i>Erigeron aliceae & foliosus</i>	3.51E-03	0.003781	1.078
<i>Eriogonum compositum</i>	1.84E-01	0	0.000
<i>Eriogonum nudum</i>	2.00E-01	0	0.000
<i>Eriogonum umbellatum</i>	1.31E-01	0.00189	0.014
<i>Eriophyllum lanatum</i>	1.79E-02	0.020794	1.162
<i>Fragaria virginiana</i>	2.56E-04	0	0.000
<i>Gayophytum humile</i>	3.74E-03	0	0.000
<i>Gilia capitata</i>	3.51E-02	0.960302	27.321
<i>Heracleum maximum</i>	1.60E-03	0	0.000
<i>Hypericum perforatum</i>	3.98E-02	0	0.000
<i>Lathyrus nevadensis</i>	1.15E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.62E-02	0.003781	0.144
<i>Lupinus laxiflorus</i>	3.84E-04	0	0.000
<i>Montia parvifolia</i>	2.56E-04	0	0.000
<i>Montia siberica</i>	1.13E-03	0	0.000
<i>Mycelis muralis</i>	1.28E-04	0	0.000
<i>Navarretia divaricata</i>	1.38E-03	0	0.000

<i>Penstemon cardwellii</i>	1.28E-04	0	0.000
<i>Phlox gracilis</i>	5.62E-03	0.009452	1.683
<i>Potentilla gracilis</i>	1.54E-03	0	0.000
<i>Rumex acetosella</i>	3.65E-02	0	0.000
<i>Tiarella trifoliata</i>	5.12E-04	0	0.000
<i>Vicia americana</i>	2.30E-03	0	0.000
<i>Arenaria capillaris</i>	1.41E-04	0	0.000
<i>Calochortus subalpinus</i>	1.02E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.31E-03	0	0.000
<i>Agoseris heterophylla</i>	5.06E-03	0	0.000
<i>Aster ledophyllum</i>	8.26E-04	0	0.000
<i>Hieracium cynoglossoides</i>	6.40E-05	0	0.000
<i>Lithophragma parviflora</i>	3.20E-04	0	0.000
<i>Silene douglasii</i>	3.20E-04	0	0.000
<i>Mimulus breweri</i>	5.44E-04	0	0.000
<i>Dichelostemma congestum</i>	1.43E-03	0	0.000
<i>Galium oreganum</i>	6.40E-05	0	0.000
<i>Saxifraga occidentalis</i>	4.90E-03	0	0.000
<i>Boykinia major</i>	6.40E-05	0	0.000
<i>Campanula scouleri</i>	4.48E-04	0	0.000
<i>Cerastium arvense</i>	5.44E-04	0	0.000
<i>Mimulus moschatus</i>	6.40E-05	0	0.000
<i>Taraxacum officinale</i>	6.40E-05	0	0.000

Polemonium carneum	7.68E-05	0	0.000
Mimulus guttatus	9.60E-05	0	0.000
Sedum spathulifolium	1.02E-04	0	0.000
Penstemon procerus	1.69E-03	0	0.000
Stellaria crispa	1.33E-02	0	0.000
Lomatium martindalei	1.86E-02	0	0.000
Erysimum asperum	1.09E-03	0	0.000
Acmispon nevadensis	2.29E-03	0	0.000
Sibbaldia procumbens	5.14E-04	0	0.000
Circaeа alpina	7.04E-04	0	0.000
Senecio triangularis	3.20E-04	0	0.000
Holodiscus dumosus	1.82E-02	0	0.000
Polygonum douglasii	3.84E-04	0	0.000
Zigadenus venenosus	2.08E-03	0	0.000
Anaphalis margaritacea	1.28E-03	0	0.000
Ligusticum grayi	2.93E-02	0	0.000

***Bombylius major* LS**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.35E-01	0.004274	0.018
Acmispon nevadensis	2.66E-03	0	0.000
Agoseris heterophylla	5.54E-03	0	0.000
Calochortus subalpinus	1.55E-03	0	0.000
Castilleja hispida	1.14E-02	0	0.000

<i>Cerastium arvense</i>	1.03E-02	0.012821	1.239
<i>Cirsium callilepis</i>	1.03E-03	0	0.000
<i>Collinsia parviflora</i>	4.49E-03	0.004274	0.951
<i>Dichelostemma congestum</i>	4.02E-03	0.012821	3.188
<i>Drymocallis glandulosa</i>	3.33E-03	0	0.000
<i>Eriogonum compositum</i>	2.24E-01	0.004274	0.019
<i>Eriogonum nudum</i>	9.69E-02	0	0.000
<i>Eriogonum umbellatum</i>	2.33E-01	0	0.000
<i>Eriophyllum lanatum</i>	1.88E-02	0.017094	0.911
<i>Gilia capitata</i>	2.26E-02	0.75641	33.479
<i>Hypericum perforatum</i>	9.22E-03	0	0.000
<i>Lathyrus nevadensis</i>	4.08E-04	0	0.000
<i>Lomatium martindalei</i>	2.31E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.43E-02	0.111111	4.578
<i>Mimulus breweri</i>	1.98E-03	0.004274	2.160
<i>Mimulus moschatus & guttatus</i>	2.17E-04	0	0.000
<i>Montia parvifolia</i>	2.35E-04	0	0.000
<i>Phlox gracilis</i>	5.31E-03	0.021368	4.027
<i>Potentilla gracilis</i>	1.10E-03	0	0.000
<i>Rumex acetosella</i>	1.12E-02	0	0.000
<i>Silene douglasii</i>	1.63E-04	0	0.000
<i>Vicia americana</i>	2.23E-03	0.012821	5.744
<i>Iris chrysophylla</i>	5.43E-05	0	0.000

<i>Mimulus tilingii</i>	2.41E-03	0.004274	1.775
<i>Stellaria crispa</i>	9.13E-04	0.012821	14.042
<i>Campanula scouleri</i>	5.43E-05	0	0.000
<i>Galium oreganum</i>	2.99E-04	0.021368	71.486
<i>Ranunculus uncinatus</i>	5.43E-05	0	0.000
<i>Viola orbiculata</i>	2.45E-04	0	0.000
<i>Gayophytum humile</i>	4.62E-04	0	0.000
<i>Mimulus moschatus</i>	5.49E-04	0	0.000
<i>Taraxacum officinale</i>	5.43E-05	0	0.000
<i>Arenaria capillaris</i>	8.15E-05	0	0.000
<i>Delphinium nuttallianum</i>	1.09E-04	0	0.000
<i>Penstemon procerus</i>	7.79E-03	0	0.000
<i>Zigadenus venenosus</i>	1.85E-03	0	0.000
<i>Lomatium triternatum</i>	1.90E-04	0	0.000
<i>Penstemon cardwellii</i>	1.90E-04	0	0.000
<i>Navarretia divaricata</i>	5.43E-04	0	0.000
<i>Solidago canadensis</i>	5.43E-04	0	0.000
<i>Sedum spathulifolium</i>	5.43E-04	0	0.000
<i>Anaphalis margaritacea</i>	2.09E-02	0	0.000
<i>Ligusticum grayi</i>	2.13E-02	0	0.000
<i>Erigeron aliceae & foliosus</i>	8.15E-03	0	0.000

***Epicauta puncticollis* CPB**

Flw Spp	Flw Prop	Int Prop	Pref Score
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Achillea millefolium	0.150045	0.042654	0.284276
Angelica arguta	0.015925	0	0
Apocynum androsaemifolium	0.000609	0	0
Calochortus subalpinus	0.000203	0	0
Carex sp.	0.000203	0	0
Cirsium callilepis	0.005442	0	0
Clarkia amoena	0.000152	0	0
Clintonia uniflora	0.000203	0	0
Erigeron aliceae & foliosus	0.010117	0.151659	14.99057
Erysimum asperum	0.00802	0.009479	1.181832
Lathyrus nevadensis	0.001293	0	0
Ligusticum grayi	0.50521	0.796209	1.575994
Montia siberica	0.000811	0	0
Orthocarpus imbricatus	0.034401	0	0
Phacelia hastata	0.006962	0	0
Rudbeckia occidentalis	0.004253	0	0
Rumex acetosella	0.015185	0	0
Senecio triangularis	0.000862	0	0
Stachys cooleyae	5.07E-05	0	0
Symphoricarpos mollis	0.007176	0	0
Tiarella trifoliata	0.007597	0	0
Tolmiea menziesii	0.001014	0	0
Vancouveria hexandra	0.000203	0	0
Vicia americana	0.003198	0	0
Collinsia parviflora	0.001727	0	0
Delphinium nuttallianum	0.008828	0	0
Erythronium grandiflorum	5.07E-05	0	0
Fragaria virginiana	0.000507	0	0
Phlox gracilis	0.004775	0	0
Viola orbiculata	0.000406	0	0
Agoseris heterophylla	0.000715	0	0
Montia parvifolia	0.000578	0	0
Polemonium carneum	0.000396	0	0
Potentilla gracilis	0.001542	0	0
Rubus parviflorus	0.000609	0	0
Aster ledophyllum	0.001608	0	0
Lewisia triphylla	0.000456	0	0
Lomatium martindalei	0.026347	0	0
Mimulus guttatus	0.000101	0	0
Cerastium arvense	0.000101	0	0
Lupinus laxiflorus	0.001572	0	0

Mimulus tilingii	5.07E-05	0	0
Aquilegia formosa	0.000279	0	0
Perideridia gairdneri	0.000152	0	0
Eriophyllum lanatum	5.07E-05	0	0
Mimulus moschatus	0.000152	0	0
Drymocallis glandulosa	0.000152	0	0
Gayophytum humile	0.000913	0	0
Solidago canadensis	0.014454	0	0
Castilleja hispida	0.000355	0	0
Zigadenus venenosus	0.000811	0	0
Prunella vulgaris	0.000406	0	0
Eriogonum nudum	0.003516	0	0
Polygonum phytolaccaeefolium	0.004666	0	0
Pachistima myrsinites	0.000254	0	0
Galium oreganum	0.000533	0	0
Valeriana scouleri	0.000279	0	0
Carex sp X	0.005528	0	0
Rainiera stricta	0.001116	0	0
Saxifraga occidentalis	0.00071	0	0
Eriogonum compositum	0.123084	0	0
Heracleum maximum	0.013085	0	0

Epicauta puncticollis CPM

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	7.88E-02	0.100977	1.282
Agoseris heterophylla	2.26E-04	0.026059	115.550
Angelica arguta	2.04E-01	0.032573	0.160
Aquilegia formosa	2.28E-03	0	0.000
Calochortus subalpinus	5.33E-04	0	0.000
Carex sp.	4.10E-05	0	0.000
Castilleja hispida	2.86E-03	0	0.000
Chamerion angustifolium	9.02E-04	0	0.000
Cirsium callilepis	3.83E-03	0	0.000

<i>Delphinium nuttallianum</i>	8.35E-03	0	0.000
<i>Erigeron aliceae & foliosus</i>	1.09E-02	0.332248	30.620
<i>Eriophyllum lanatum</i>	4.53E-03	0.009772	2.157
<i>Ligusticum grayi</i>	3.98E-01	0.169381	0.426
<i>Lilium pardalinum</i>	4.31E-04	0	0.000
<i>Lupinus laxiflorus</i>	5.39E-03	0	0.000
<i>Mimulus moschatus & guttatus</i>	4.92E-04	0	0.000
<i>Montia parvifolia</i>	2.51E-03	0	0.000
<i>Orthocarpus imbricatus</i>	2.25E-02	0.009772	0.435
<i>Phacelia hastata</i>	6.26E-03	0	0.000
<i>Prunella vulgaris</i>	8.27E-03	0	0.000
<i>Rainiera stricta</i>	2.67E-03	0	0.000
<i>Rumex acetosella</i>	3.18E-02	0	0.000
<i>Solidago canadensis</i>	1.58E-02	0.221498	14.006
<i>Stachys cooleyae</i>	2.85E-03	0	0.000
<i>Vicia americana</i>	2.45E-03	0	0.000
<i>Mimulus breweri</i>	1.75E-03	0	0.000
<i>Collinsia parviflora</i>	2.55E-03	0	0.000
<i>Phlox gracilis</i>	1.33E-02	0	0.000
<i>Viola orbiculata</i>	8.20E-05	0	0.000
<i>Penstemon procerus</i>	8.96E-03	0.003257	0.363
<i>Polemonium carneum</i>	3.81E-04	0	0.000
<i>Mimulus guttatus</i>	1.79E-03	0	0.000

<i>Mimulus tilingii</i>	2.11E-03	0	0.000
<i>Allium amplectens</i>	1.03E-04	0	0.000
<i>Aster ledophyllus</i>	2.13E-04	0.055375	259.710
<i>Epilobium oregonense</i>	2.87E-04	0	0.000
<i>Iris chrysophylla</i>	4.10E-05	0	0.000
<i>Phlox diffusa</i>	9.84E-05	0	0.000
<i>Anaphalis margaritacea</i>	1.16E-02	0	0.000
<i>Fragaria virginiana</i>	4.10E-05	0	0.000
<i>Rubus parviflorus</i>	2.46E-04	0	0.000
<i>Gayophytum humile</i>	2.58E-03	0	0.000
<i>Rudbeckia occidentalis</i>	2.46E-04	0	0.000
<i>Lomatium martindalei</i>	2.30E-02	0	0.000
<i>Potentilla gracilis</i>	2.26E-04	0	0.000
<i>Smilacina racemosa</i>	6.15E-04	0	0.000
<i>Carex sp X</i>	2.05E-04	0.003257	15.888
<i>Drymocallis glandulosa</i>	2.07E-03	0	0.000
<i>Navarretia divaricata</i>	1.44E-04	0	0.000
<i>Mimulus moschatus</i>	9.36E-04	0	0.000
<i>Senecio integerrimus</i>	6.56E-04	0	0.000
<i>Osmorhiza sp X</i>	7.26E-04	0	0.000
<i>Rosa gymnocarpa</i>	8.20E-05	0	0.000
<i>Zigadenus venenosus</i>	6.03E-03	0	0.000
<i>Eriogonum umbellatum</i>	1.75E-02	0	0.000

Epilobium angustifolium	2.50E-03	0	0.000
Erysimum asperum	2.05E-04	0	0.000
Galium oreganum	1.48E-03	0	0.000
Clarkia amoena	2.87E-04	0	0.000
Perideridia gairdneri	3.36E-03	0	0.000
Platanthera dilatata	4.10E-04	0	0.000
Penstemon cardwellii	5.74E-04	0	0.000
Eriogonum compositum	4.58E-02	0.035831	0.782
Eriogonum nudum	2.26E-03	0	0.000
Holodiscus dumosus	2.87E-02	0	0.000

Epicauta puncticollis CPS

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.387616	0.034483	0.088961
Castilleja hispida	0.037928	0	0
Erigeron aliceae & foliosus	0.005725	0.517241	90.35229
Hypericum perforatum	0.006368	0.172414	27.07599
Ligusticum grayi	0.036988	0	0
Lupinus laxiflorus	0.010469	0	0
Phacelia hastata	0.015444	0.068966	4.465665
Rumex acetosella	0.046795	0	0
Sedum oreganum	0.129782	0	0
Silene douglasii	0.005073	0	0
Amelanchier alnifolia	0.01706	0	0
Arenaria macrophylla	0.000679	0	0
Calochortus subalpinus	0.005497	0	0
Collinsia parviflora	0.000679	0	0
Comandra umbellata	0.008433	0	0
Fragaria virginiana	0.002358	0	0
Phlox gracilis	0.019385	0	0
Penstemon cardwellii	0.021989	0	0
Drymocallis glandulosa	0.008416	0.137931	16.38971

Rosa gymnocarpa	0.002036	0	0
Cirsium callilepis	0.00492	0	0
Eriophyllum lanatum	0.000509	0	0
Penstemon procerus	0.011215	0	0
Aster ledophyllus	0.001527	0.068966	45.16276
Polygonum minimum	0.00017	0	0
Agoseris heterophylla	0.00017	0	0
Phlox diffusa	0.000899	0	0
Arctostaphylos nevadensis	0.001561	0	0
Vaccinium alaskaense	0.000339	0	0
Vicia americana	0.001527	0	0
Saxifraga occidentalis	0.0047	0	0
Potentilla gracilis	0.001357	0	0
Gilia capitata	0.000509	0	0
Claytonia lanceolata	0.000679	0	0
Lomatium martindalei	0.107724	0	0
Pachistima myrsinites	0.001001	0	0
Anaphalis margaritacea	0.003563	0	0
Eriogonum umbellatum	0.00492	0	0
Sorbus sitchensis	0.025451	0	0
Eriogonum compositum	0.058537	0	0

***Epicauta puncticollis* M2**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.58E-01	0.011277	0.071
Angelica arguta	1.42E-01	0.014925	0.105
Aquilegia formosa	6.30E-03	0	0.000
Carex sp.	3.27E-05	0	0.000
Castilleja hispida	1.55E-03	0	0.000
Cerastium arvense	2.76E-04	0	0.000
Cirsium callilepis	4.84E-03	0.000663	0.137
Delphinium nuttallianum	9.21E-03	0	0.000
Erigeron aliceae & foliosus	5.76E-03	0.033167	5.760

<i>Eriogonum nudum</i>	1.62E-03	0	0.000
<i>Eriophyllum lanatum</i>	1.98E-02	0.21791	11.016
<i>Erysimum asperum</i>	1.13E-02	0	0.000
<i>Gayophytum humile</i>	2.04E-03	0	0.000
<i>Gilia capitata</i>	1.13E-02	0.608624	54.063
<i>Lathyrus nevadensis</i>	2.78E-04	0	0.000
<i>Ligusticum grayi</i>	3.65E-01	0.038474	0.106
<i>Lupinus laxiflorus</i>	1.33E-02	0	0.000
<i>Mimulus moschatus & guttatus</i>	1.47E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.13E-02	0.00597	0.191
<i>Phacelia hastata</i>	1.06E-02	0	0.000
<i>Phlox gracilis</i>	5.82E-03	0	0.000
<i>Polemonium carneum</i>	4.48E-04	0	0.000
<i>Potentilla gracilis</i>	1.04E-02	0.002322	0.223
<i>Rumex acetosella</i>	6.76E-02	0	0.000
<i>Silene douglasii</i>	4.90E-05	0	0.000
<i>Solidago canadensis</i>	1.12E-02	0.058043	5.204
<i>Symphoricarpos mollis</i>	2.71E-03	0	0.000
<i>Vicia americana</i>	3.90E-03	0.000332	0.085
<i>Arenaria capillaris</i>	2.80E-04	0	0.000
<i>Collinsia parviflora</i>	2.82E-03	0	0.000
<i>Mimulus guttatus</i>	2.98E-04	0	0.000
<i>Mimulus breweri</i>	1.23E-03	0	0.000

<i>Mimulus tilingii</i>	1.02E-03	0	0.000
<i>Sagina saginoides</i>	3.27E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.04E-03	0	0.000
<i>Aster ledophyllus</i>	4.25E-04	0.004975	11.704
<i>Agoseris aurantiaca</i>	3.27E-05	0	0.000
<i>Phlox diffusa</i>	3.27E-05	0	0.000
<i>Stellaria crispa</i>	2.65E-04	0	0.000
<i>Lotus micranthus</i>	5.26E-04	0	0.000
<i>Navarretia divaricata</i>	1.43E-03	0	0.000
<i>Polygonum minimum</i>	1.96E-04	0	0.000
<i>Campanula scouleri</i>	3.27E-05	0	0.000
<i>Perideridia gairdneri</i>	1.91E-02	0	0.000
<i>Barbarea orthoceras</i>	5.89E-04	0	0.000
<i>Eriogonum umbellatum</i>	1.29E-03	0.000663	0.514
<i>Mimulus moschatus</i>	6.87E-05	0	0.000
<i>Lithophragma parviflora</i>	6.54E-05	0	0.000
<i>Lewisia triphylla</i>	6.87E-05	0	0.000
<i>Polygonum douglasii</i>	7.62E-05	0	0.000
<i>Lomatium martindalei</i>	5.72E-03	0	0.000
<i>Eriogonum compositum</i>	6.50E-02	0.002653	0.041
<i>Holodiscus dumosus</i>	6.18E-04	0	0.000
<i>Saxifraga occidentalis</i>	1.62E-03	0	0.000

***Epicauta puncticollis* NE**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.072781	0.029197	0.401164
Agoseris heterophylla	0.000991	0.021898	22.08967
Anaphalis margaritacea	0.029046	0.109489	3.769568
Calochortus subalpinus	0.00085	0	0
Carex sp.	0.000142	0	0
Castilleja hispida	0.023185	0	0
Cirsium callilepis	0.016073	0	0
Collinsia parviflora	0.004957	0	0
Delphinium nuttallianum	0.002832	0	0
Erigeron aliceae & foliosus	0.0109	0.058394	5.357158
Eriogonum nudum	0.001275	0	0
Eriogonum umbellatum	0.059351	0.029197	0.491936
Eriophyllum lanatum	0.049995	0.328467	6.570022
Erysimum asperum	0.016923	0	0
Gilia capitata	0.010791	0.116788	10.82258
Ligusticum grayi	0.388171	0.20438	0.52652
Lupinus laxiflorus	0.029325	0	0
Orthocarpus imbricatus	0.067459	0.10219	1.514844
Phacelia hastata	0.018941	0	0
Phlox gracilis	0.00337	0	0
Rumex acetosella	0.032134	0	0
Gayophytum humile	0.000566	0	0
Mimulus breweri	0.001275	0	0
Potentilla gracilis	0.002124	0	0
Aster ledophyllum	0.000283	0	0
Drymocallis glandulosa	0.001119	0	0
Dodecatheon alpinum	0.000283	0	0
Vicia americana	0.000283	0	0
Penstemon procerus	0.005452	0	0
Campanula scouleri	0.000283	0	0
Galium oreganum	0.001629	0	0
Penstemon cardwellii	0.000708	0	0
Eriogonum compositum	0.056717	0	0
Lomatium martindalei	0.009417	0	0
Sedum spathulifolium	0.000991	0	0
Epilobium oregonense	0.001133	0	0
Barbarea orthoceras	0.002053	0	0
Holodiscus dumosus	0.07619	0	0

Epicauta puncticollis RP1

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.58E-01	0.264706	0.739
Agoseris heterophylla	7.61E-03	0.047794	6.277
Angelica arguta	2.39E-04	0	0.000
Calochortus subalpinus	2.79E-03	0	0.000
Castilleja hispida	6.03E-02	0	0.000
Cerastium arvense	2.11E-03	0	0.000
Cirsium callilepis	3.98E-04	0	0.000
Clarkia amoena	2.12E-03	0	0.000
Eriogonum compositum	8.89E-02	0	0.000
Eriogonum nudum	9.83E-02	0	0.000
Eriogonum umbellatum	5.81E-02	0.018382	0.316
Eriophyllum lanatum	3.45E-02	0.4375	12.691
Gilia capitata	4.23E-02	0.0625	1.477
Lupinus laxiflorus	3.15E-02	0	0.000
Orthocarpus imbricatus	1.21E-02	0	0.000
Rumex acetosella	5.84E-02	0	0.000
Vicia americana	2.53E-03	0	0.000
Lithophragma tenellum	2.94E-04	0	0.000
Arenaria capillaris	4.33E-03	0	0.000
Penstemon procerus	6.92E-03	0	0.000
Phlox gracilis	1.11E-02	0	0.000

<i>Collinsia parviflora</i>	2.23E-03	0	0.000
<i>Gayophytum humile</i>	2.08E-03	0	0.000
<i>Lathyrus nevadensis</i>	6.05E-04	0	0.000
<i>Mimulus guttatus</i>	7.96E-05	0	0.000
<i>Navarretia divaricata</i>	1.89E-03	0	0.000
<i>Stellaria crispa</i>	9.55E-04	0	0.000
<i>Mimulus breweri</i>	3.23E-03	0	0.000
<i>Hypericum perforatum</i>	1.21E-02	0.154412	12.737
<i>Epilobium oregonense</i>	6.21E-04	0	0.000
<i>Galium aparine</i>	7.96E-05	0	0.000
<i>Acmispon nevadensis</i>	7.15E-03	0	0.000
<i>Senecio integerrimus</i>	7.96E-05	0	0.000
<i>Delphinium nuttallianum</i>	9.15E-04	0	0.000
<i>Phlox diffusa</i>	4.85E-04	0	0.000
<i>Erysimum asperum</i>	1.28E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.57E-04	0	0.000
<i>Ranunculus uncinatus</i>	3.18E-04	0	0.000
<i>Madia minima</i>	1.62E-03	0	0.000
<i>Polygonum minimum</i>	2.39E-04	0	0.000
<i>Zigadenus venenosus</i>	3.93E-03	0	0.000
<i>Comandra umbellata</i>	3.18E-04	0	0.000
<i>Lotus micranthus</i>	9.55E-04	0	0.000
<i>Phacelia hastata</i>	4.77E-04	0	0.000

Potentilla gracilis	4.77E-04	0	0.000
Lomatium martindalei	2.17E-02	0	0.000
Lomatium triternatum	3.58E-02	0	0.000
Ligusticum grayi	1.24E-02	0.014706	1.190
Saxifraga occidentalis	1.99E-03	0	0.000
Anaphalis margaritacea	2.39E-03	0	0.000

***Epicauta puncticollis* RP2**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.19E-01	0.321212	1.465
Acmispon nevadensis	1.31E-02	0	0.000
Calochortus subalpinus	1.76E-03	0	0.000
Castilleja hispida	4.24E-02	0	0.000
Cirsium callilepis	1.72E-03	0	0.000
Collinsia parviflora	2.24E-03	0	0.000
Eriogonum nudum	1.40E-01	0.048485	0.346
Eriogonum umbellatum	1.77E-01	0	0.000
Eriophyllum lanatum	2.55E-02	0.436364	17.108
Erysimum asperum	1.45E-03	0	0.000
Gilia capitata	2.50E-02	0.157576	6.296
Hypericum perforatum	5.83E-03	0.012121	2.080
Lupinus laxiflorus	2.57E-02	0.006061	0.236
Orthocarpus imbricatus	1.29E-03	0	0.000
Penstemon procerus	8.62E-04	0	0.000

Rumex acetosella	3.05E-02	0.006061	0.199
Silene douglasii	8.01E-03	0	0.000
Agoseris heterophylla	3.08E-03	0.012121	3.930
Arenaria capillaris	1.04E-03	0	0.000
Arenaria macrophylla	1.46E-04	0	0.000
Phlox gracilis	1.03E-02	0	0.000
Viola orbiculata	6.63E-05	0	0.000
Clarkia amoena	2.01E-03	0	0.000
Rosa gymnocarpa	6.63E-05	0	0.000
Vicia americana	1.15E-03	0	0.000
Gayophytum humile	3.65E-04	0	0.000
Mimulus breweri	8.68E-04	0	0.000
Epilobium angustifolium	6.63E-05	0	0.000
Delphinium nuttallianum	4.97E-04	0	0.000
Navarretia divaricata	3.98E-04	0	0.000
Symphoricarpos mollis	5.47E-03	0	0.000
Aster ledophyllum	1.33E-04	0	0.000
Haplopappus hallii	6.63E-05	0	0.000
Cerastium arvense	6.63E-05	0	0.000
Drymocallis glandulosa	1.99E-04	0	0.000
Epilobium oregonense	2.65E-04	0	0.000
Lathyrus nevadensis	3.31E-04	0	0.000
Polygonum douglasii	9.94E-05	0	0.000

Zigadenus venenosus	3.43E-03	0	0.000
Eriogonum compositum	2.17E-01	0	0.000
Lomatium triternatum	1.12E-02	0	0.000
Anaphalis margaritacea	2.25E-03	0	0.000
Lomatium martindalei	3.08E-03	0	0.000
Ribes viscosissimum	9.28E-04	0	0.000
Ligusticum grayi	9.68E-03	0	0.000
Phlox diffusa	3.98E-03	0	0.000

***Epicauta puncticollis* LM**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.22E-01	0.071429	0.222
Calochortus subalpinus	2.03E-03	0	0.000
Carex sp.	2.03E-04	0	0.000
Castilleja hispida	3.70E-02	0	0.000
Cirsium callilepis	4.07E-04	0	0.000
Claytonia lanceolata	4.07E-04	0	0.000
Collinsia parviflora	4.00E-03	0	0.000
Delphinium nuttallianum	8.99E-03	0	0.000
Erigeron aliceae & foliosus	3.43E-03	0.034286	10.009
Eriophyllum lanatum	2.36E-02	0.331429	14.044
Lathyrus nevadensis	3.15E-03	0	0.000
Ligusticum grayi	1.33E-01	0.197143	1.480
Mimulus moschatus & guttatus	5.99E-04	0	0.000

<i>Montia parvifolia</i>	5.06E-03	0	0.000
<i>Montia siberica</i>	4.07E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.99E-02	0.014286	0.358
<i>Orthocarpus imbricatus</i>	6.78E-05	0	0.000
<i>Penstemon procerus</i>	1.82E-02	0	0.000
<i>Phlox gracilis</i>	2.02E-02	0	0.000
<i>Potentilla gracilis</i>	2.29E-02	0.025714	1.123
<i>Rumex acetosella</i>	1.92E-02	0	0.000
<i>Sedum stenopetalum</i>	1.36E-04	0	0.000
<i>Solidago canadensis</i>	4.75E-02	0.311429	6.562
<i>Vicia americana</i>	5.75E-03	0	0.000
<i>Mimulus guttatus</i>	8.32E-03	0	0.000
<i>Mimulus breweri</i>	5.31E-03	0	0.000
<i>Drymocallis glandulosa</i>	1.22E-02	0	0.000
<i>Arenaria capillaris</i>	8.81E-04	0	0.000
<i>Epilobium oregonense</i>	3.17E-03	0	0.000
<i>Mimulus tilingii</i>	5.06E-03	0	0.000
<i>Convolvulus nyctagineus</i>	6.78E-05	0	0.000
<i>Cerastium arvense</i>	2.71E-04	0	0.000
<i>Saxifraga occidentalis</i>	6.78E-05	0	0.000
<i>Platanthera dilatata</i>	6.78E-05	0	0.000
<i>Lewisia triphylla</i>	1.36E-04	0	0.000
<i>Mimulus moschatus</i>	2.32E-03	0	0.000

Erysimum asperum	2.71E-04	0	0.000
Gayophytum humile	7.46E-05	0	0.000
Aquilegia formosa	5.02E-04	0	0.000
Lupinus laxiflorus	1.97E-02	0	0.000
Symphoricarpos mollis	2.03E-04	0	0.000
Angelica arguta	8.64E-02	0	0.000
Hypericum perforatum	2.03E-04	0	0.000
Zigadenus venenosus	2.84E-02	0	0.000
Perideridia gairdneri	5.12E-02	0.014286	0.279
Stachys cooleyae	3.39E-04	0	0.000
Boykinia major	3.39E-04	0	0.000
Senecio triangularis	6.78E-04	0	0.000
Polemonium carneum	1.73E-03	0	0.000
Saxifraga oregana	1.23E-02	0	0.000
Comandra umbellata	5.20E-04	0	0.000
Eriogonum nudum	5.42E-04	0	0.000
Eriogonum compositum	1.80E-02	0	0.000
Eriogonum umbellatum	2.03E-02	0	0.000
Arenaria macrophylla	2.03E-03	0	0.000

***Epicauta puncticollis* LB**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.022235	0	0
Boykinia major	0.324468	0.285714	0.880563
Carex sp.	0.013402	0	0

Castilleja hispida	0.000307	0	0
Dodecatheon jeffreyi	0.003536	0	0
Epilobium oregonense	0.002454	0	0
Eriophyllum lanatum	0.002607	0	0
Heracleum maximum	0.021468	0	0
Hypericum anagalloides	0.002046	0	0
Ligusticum grayi	0.359084	0.285714	0.795675
Lupinus laxiflorus	0.011961	0	0
Mimulus moschatus & guttatus	0.002147	0	0
Mitella pentandra	0.001635	0	0
Platanthera dilatata	0.010428	0	0
Scirpus sp.	0.002147	0	0
Senecio triangularis	0.042998	0	0
Solidago canadensis	0.02659	0.428571	16.11765
Stachys cooleyae	0.020999	0	0
Vicia americana	0.011072	0	0
Dodecatheon alpinum	0.023309	0	0
Mertensia bella	0.000613	0	0
Mimulus tilingii	0.006134	0	0
Phlox gracilis	0.000307	0	0
Prunella vulgaris	0.000307	0	0
Senecio integerrimus	0.00963	0	0
Mimulus moschatus	0.000859	0	0
Collinsia grandiflora	0.001472	0	0
Potentilla gracilis	0.001533	0	0
Mimulus guttatus	0.001874	0	0
Cerastium arvense	0.00092	0	0
Penstemon procerus	0.001227	0	0
Eriogonum umbellatum	0.004907	0	0
Angelica arguta	0.012268	0	0
Carex sp X	0.009201	0	0
Anaphalis margaritacea	0.022389	0	0
Perideridia gairdneri	0.021468	0	0

***Epicauta puncticollis* LO**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.75E-01	0	0.000
Castilleja hispida	1.35E-02	0	0.000

<i>Cirsium callilepis</i>	1.59E-03	0	0.000
<i>Collinsia parviflora</i>	2.16E-03	0	0.000
<i>Delphinium nuttallianum</i>	8.70E-04	0	0.000
<i>Epilobium oregonense</i>	1.44E-03	0	0.000
<i>Erigeron aliceae & foliosus</i>	3.51E-03	0	0.000
<i>Eriogonum compositum</i>	1.84E-01	0	0.000
<i>Eriogonum nudum</i>	2.00E-01	0.018519	0.093
<i>Eriogonum umbellatum</i>	1.31E-01	0.009259	0.071
<i>Eriophyllum lanatum</i>	1.79E-02	0.231481	12.936
<i>Fragaria virginiana</i>	2.56E-04	0	0.000
<i>Gayophytum humile</i>	3.74E-03	0	0.000
<i>Gilia capitata</i>	3.51E-02	0.287037	8.166
<i>Heracleum maximum</i>	1.60E-03	0	0.000
<i>Hypericum perforatum</i>	3.98E-02	0.25	6.280
<i>Lathyrus nevadensis</i>	1.15E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.62E-02	0.018519	0.707
<i>Lupinus laxiflorus</i>	3.84E-04	0	0.000
<i>Montia parvifolia</i>	2.56E-04	0	0.000
<i>Montia siberica</i>	1.13E-03	0	0.000
<i>Mycelis muralis</i>	1.28E-04	0	0.000
<i>Navarretia divaricata</i>	1.38E-03	0	0.000
<i>Penstemon cardwellii</i>	1.28E-04	0	0.000
<i>Phlox gracilis</i>	5.62E-03	0	0.000

Potentilla gracilis	1.54E-03	0	0.000
Rumex acetosella	3.65E-02	0	0.000
Tiarella trifoliata	5.12E-04	0	0.000
Vicia americana	2.30E-03	0	0.000
Arenaria capillaris	1.41E-04	0	0.000
Calochortus subalpinus	1.02E-03	0	0.000
Drymocallis glandulosa	5.31E-03	0	0.000
Agoseris heterophylla	5.06E-03	0.046296	9.144
Aster ledophyllum	8.26E-04	0.138889	168.210
Hieracium cynoglossoides	6.40E-05	0	0.000
Lithophragma parviflora	3.20E-04	0	0.000
Silene douglasii	3.20E-04	0	0.000
Mimulus breweri	5.44E-04	0	0.000
Dichelostemma congestum	1.43E-03	0	0.000
Galium oreganum	6.40E-05	0	0.000
Saxifraga occidentalis	4.90E-03	0	0.000
Boykinia major	6.40E-05	0	0.000
Campanula scouleri	4.48E-04	0	0.000
Cerastium arvense	5.44E-04	0	0.000
Mimulus moschatus	6.40E-05	0	0.000
Taraxacum officinale	6.40E-05	0	0.000
Polemonium carneum	7.68E-05	0	0.000
Mimulus guttatus	9.60E-05	0	0.000

Sedum spathulifolium	1.02E-04	0	0.000
Penstemon procerus	1.69E-03	0	0.000
Stellaria crispa	1.33E-02	0	0.000
Lomatium martindalei	1.86E-02	0	0.000
Erysimum asperum	1.09E-03	0	0.000
Acmispon nevadensis	2.29E-03	0	0.000
Sibbaldia procumbens	5.14E-04	0	0.000
Circaeа alpina	7.04E-04	0	0.000
Senecio triangularis	3.20E-04	0	0.000
Holodiscus dumosus	1.82E-02	0	0.000
Polygonum douglasii	3.84E-04	0	0.000
Zigadenus venenosus	2.08E-03	0	0.000
Anaphalis margaritacea	1.28E-03	0	0.000
Ligusticum grayi	2.93E-02	0	0.000

Epicauta puncticollis LS

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.35E-01	0.507937	2.163
Acmispon nevadensis	2.66E-03	0	0.000
Agoseris heterophylla	5.54E-03	0	0.000
Calochortus subalpinus	1.55E-03	0	0.000
Castilleja hispida	1.14E-02	0	0.000
Cerastium arvense	1.03E-02	0	0.000
Cirsium callilepis	1.03E-03	0.031746	30.858

<i>Collinsia parviflora</i>	4.49E-03	0	0.000
<i>Dichelostemma congestum</i>	4.02E-03	0	0.000
<i>Drymocallis glandulosa</i>	3.33E-03	0	0.000
<i>Eriogonum compositum</i>	2.24E-01	0.095238	0.425
<i>Eriogonum nudum</i>	9.69E-02	0.047619	0.491
<i>Eriogonum umbellatum</i>	2.33E-01	0.047619	0.205
<i>Eriophyllum lanatum</i>	1.88E-02	0.15873	8.459
<i>Gilia capitata</i>	2.26E-02	0.047619	2.108
<i>Hypericum perforatum</i>	9.22E-03	0.047619	5.163
<i>Lathyrus nevadensis</i>	4.08E-04	0	0.000
<i>Lomatium martindalei</i>	2.31E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.43E-02	0	0.000
<i>Mimulus breweri</i>	1.98E-03	0	0.000
<i>Mimulus moschatus & guttatus</i>	2.17E-04	0	0.000
<i>Montia parvifolia</i>	2.35E-04	0	0.000
<i>Phlox gracilis</i>	5.31E-03	0	0.000
<i>Potentilla gracilis</i>	1.10E-03	0	0.000
<i>Rumex acetosella</i>	1.12E-02	0	0.000
<i>Silene douglasii</i>	1.63E-04	0	0.000
<i>Vicia americana</i>	2.23E-03	0	0.000
<i>Iris chrysophylla</i>	5.43E-05	0	0.000
<i>Mimulus tilingii</i>	2.41E-03	0	0.000
<i>Stellaria crispa</i>	9.13E-04	0	0.000

<i>Campanula scouleri</i>	5.43E-05	0	0.000
<i>Galium oreganum</i>	2.99E-04	0	0.000
<i>Ranunculus uncinatus</i>	5.43E-05	0	0.000
<i>Viola orbiculata</i>	2.45E-04	0	0.000
<i>Gayophytum humile</i>	4.62E-04	0	0.000
<i>Mimulus moschatus</i>	5.49E-04	0	0.000
<i>Taraxacum officinale</i>	5.43E-05	0	0.000
<i>Arenaria capillaris</i>	8.15E-05	0	0.000
<i>Delphinium nuttallianum</i>	1.09E-04	0	0.000
<i>Penstemon procerus</i>	7.79E-03	0	0.000
<i>Zigadenus venenosus</i>	1.85E-03	0	0.000
<i>Lomatium triternatum</i>	1.90E-04	0	0.000
<i>Penstemon cardwellii</i>	1.90E-04	0	0.000
<i>Navarretia divaricata</i>	5.43E-04	0	0.000
<i>Solidago canadensis</i>	5.43E-04	0	0.000
<i>Sedum spathulifolium</i>	5.43E-04	0	0.000
<i>Anaphalis margaritacea</i>	2.09E-02	0	0.000
<i>Ligusticum grayi</i>	2.13E-02	0.015873	0.745
<i>Erigeron aliceae & foliosus</i>	8.15E-03	0	0.000

***Eristalis hirtus* CPB**

Flw Spp	Flw Prop	Int Prop	Pref Score
<i>Achillea millefolium</i>	0.150045	0.041667	0.277695
<i>Angelica arguta</i>	0.015925	0	0
<i>Apocynum androsaemifolium</i>	0.000609	0	0

<i>Calochortus subalpinus</i>	0.000203	0	0
<i>Carex</i> sp.	0.000203	0	0
<i>Cirsium callilepis</i>	0.005442	0	0
<i>Clarkia amoena</i>	0.000152	0	0
<i>Clintonia uniflora</i>	0.000203	0	0
<i>Erigeron aliceae & foliosus</i>	0.010117	0.5	49.42203
<i>Erysimum asperum</i>	0.00802	0	0
<i>Lathyrus nevadensis</i>	0.001293	0	0
<i>Ligusticum grayi</i>	0.50521	0.208333	0.41237
<i>Montia siberica</i>	0.000811	0	0
<i>Orthocarpus imbricatus</i>	0.034401	0	0
<i>Phacelia hastata</i>	0.006962	0	0
<i>Rudbeckia occidentalis</i>	0.004253	0	0
<i>Rumex acetosella</i>	0.015185	0	0
<i>Senecio triangularis</i>	0.000862	0	0
<i>Stachys cooleyae</i>	5.07E-05	0	0
<i>Symphoricarpos mollis</i>	0.007176	0	0
<i>Tiarella trifoliata</i>	0.007597	0	0
<i>Tolmiea menziesii</i>	0.001014	0	0
<i>Vancouveria hexandra</i>	0.000203	0	0
<i>Vicia americana</i>	0.003198	0	0
<i>Collinsia parviflora</i>	0.001727	0	0
<i>Delphinium nuttallianum</i>	0.008828	0	0
<i>Erythronium grandiflorum</i>	5.07E-05	0	0
<i>Fragaria virginiana</i>	0.000507	0	0
<i>Phlox gracilis</i>	0.004775	0.125	26.18018
<i>Viola orbiculata</i>	0.000406	0	0
<i>Agoseris heterophylla</i>	0.000715	0	0
<i>Montia parvifolia</i>	0.000578	0	0
<i>Polemonium carneum</i>	0.000396	0	0
<i>Potentilla gracilis</i>	0.001542	0	0
<i>Rubus parviflorus</i>	0.000609	0	0
<i>Aster ledophyllum</i>	0.001608	0	0
<i>Lewisia triphylla</i>	0.000456	0	0
<i>Lomatium martindalei</i>	0.026347	0	0
<i>Mimulus guttatus</i>	0.000101	0	0
<i>Cerastium arvense</i>	0.000101	0	0
<i>Lupinus laxiflorus</i>	0.001572	0	0
<i>Mimulus tilingii</i>	5.07E-05	0	0
<i>Aquilegia formosa</i>	0.000279	0	0
<i>Perideridia gairdneri</i>	0.000152	0	0

Eriophyllum lanatum	5.07E-05	0	0
Mimulus moschatus	0.000152	0	0
Drymocallis glandulosa	0.000152	0	0
Gayophytum humile	0.000913	0	0
Solidago canadensis	0.014454	0.041667	2.882663
Castilleja hispida	0.000355	0	0
Zigadenus venenosus	0.000811	0	0
Prunella vulgaris	0.000406	0	0
Eriogonum nudum	0.003516	0	0
Polygonum phytolaccaeefolium	0.004666	0.041667	8.929988
Pachistima myrsinites	0.000254	0	0
Galium oreganum	0.000533	0	0
Valeriana scouleri	0.000279	0	0
Carex sp X	0.005528	0	0
Rainiera stricta	0.001116	0	0
Saxifraga occidentalis	0.00071	0	0
Eriogonum compositum	0.123084	0.041667	0.338522
Heracleum maximum	0.013085	0	0

Eristalis hirtus CPM

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	7.88E-02	0.166667	2.116
Agoseris heterophylla	2.26E-04	0	0.000
Angelica arguta	2.04E-01	0.055556	0.273
Aquilegia formosa	2.28E-03	0	0.000
Calochortus subalpinus	5.33E-04	0	0.000
Carex sp.	4.10E-05	0	0.000
Castilleja hispida	2.86E-03	0	0.000
Chamerion angustifolium	9.02E-04	0	0.000
Cirsium callilepis	3.83E-03	0	0.000
Delphinium nuttallianum	8.35E-03	0.027778	3.327

<i>Erigeron aliceae & foliosus</i>	1.09E-02	0.277778	25.600
<i>Eriophyllum lanatum</i>	4.53E-03	0.027778	6.131
<i>Ligusticum grayi</i>	3.98E-01	0.25	0.629
<i>Lilium pardalinum</i>	4.31E-04	0	0.000
<i>Lupinus laxiflorus</i>	5.39E-03	0	0.000
<i>Mimulus moschatus & guttatus</i>	4.92E-04	0	0.000
<i>Montia parvifolia</i>	2.51E-03	0	0.000
<i>Orthocarpus imbricatus</i>	2.25E-02	0	0.000
<i>Phacelia hastata</i>	6.26E-03	0	0.000
<i>Prunella vulgaris</i>	8.27E-03	0	0.000
<i>Rainiera stricta</i>	2.67E-03	0	0.000
<i>Rumex acetosella</i>	3.18E-02	0	0.000
<i>Solidago canadensis</i>	1.58E-02	0	0.000
<i>Stachys cooleyae</i>	2.85E-03	0	0.000
<i>Vicia americana</i>	2.45E-03	0	0.000
<i>Mimulus breweri</i>	1.75E-03	0	0.000
<i>Collinsia parviflora</i>	2.55E-03	0	0.000
<i>Phlox gracilis</i>	1.33E-02	0	0.000
<i>Viola orbiculata</i>	8.20E-05	0	0.000
<i>Penstemon procerus</i>	8.96E-03	0	0.000
<i>Polemonium carneum</i>	3.81E-04	0	0.000
<i>Mimulus guttatus</i>	1.79E-03	0	0.000
<i>Mimulus tilingii</i>	2.11E-03	0	0.000

Allium amplectens	1.03E-04	0	0.000
Aster ledophyllus	2.13E-04	0	0.000
Epilobium oregonense	2.87E-04	0	0.000
Iris chrysophylla	4.10E-05	0	0.000
Phlox diffusa	9.84E-05	0	0.000
Anaphalis margaritacea	1.16E-02	0.055556	4.810
Fragaria virginiana	4.10E-05	0	0.000
Rubus parviflorus	2.46E-04	0	0.000
Gayophytum humile	2.58E-03	0	0.000
Rudbeckia occidentalis	2.46E-04	0	0.000
Lomatium martindalei	2.30E-02	0	0.000
Potentilla gracilis	2.26E-04	0	0.000
Smilacina racemosa	6.15E-04	0	0.000
Carex sp X	2.05E-04	0	0.000
Drymocallis glandulosa	2.07E-03	0	0.000
Navarretia divaricata	1.44E-04	0	0.000
Mimulus moschatus	9.36E-04	0	0.000
Senecio integerrimus	6.56E-04	0	0.000
Osmorhiza sp X	7.26E-04	0	0.000
Rosa gymnocarpa	8.20E-05	0	0.000
Zigadenus venenosus	6.03E-03	0.138889	23.043
Eriogonum umbellatum	1.75E-02	0	0.000
Epilobium angustifolium	2.50E-03	0	0.000

Erysimum asperum	2.05E-04	0	0.000
Galium oreganum	1.48E-03	0	0.000
Clarkia amoena	2.87E-04	0	0.000
Perideridia gairdneri	3.36E-03	0	0.000
Platanthera dilatata	4.10E-04	0	0.000
Penstemon cardwellii	5.74E-04	0	0.000
Eriogonum compositum	4.58E-02	0	0.000
Eriogonum nudum	2.26E-03	0	0.000
Holodiscus dumosus	2.87E-02	0	0.000

Eristalis hirtus CPR

Flw Spp	Flw Prop	Int Prop	Pref Score
Castilleja hispida	0.054081	0	0
Montia parvifolia	0.011468	0	0
Penstemon cardwellii	0.060357	0	0
Sedum oreganum	0.461851	1	2.165201
Arctostaphylos nevadensis	0.003385	0	0
Collinsia parviflora	0.015742	0	0
Delphinium nuttallianum	0.035757	0	0
Phlox gracilis	0.050777	0	0
Arenaria macrophylla	0.005755	0	0
Calochortus subalpinus	0.013209	0	0
Iris chrysophylla	0.004486	0	0
Mimulus breweri	0.012166	0	0
Penstemon procerus	0.071896	0	0
Silene douglasii	0.000423	0	0
Epilobium oregonense	0.000846	0	0
Polygonum minimum	0.000423	0	0
Lupinus laxiflorus	0.042105	0	0
Gayophytum humile	0.000846	0	0
Claytonia lanceolata	0.001989	0	0
Mimulus moschatus	0.000423	0	0
Vicia americana	0.001269	0	0

Erigeron aliceae & foliosus	0.000423	0	0
Phlox diffusa	0.000508	0	0
Zigadenus venenosus	0.023909	0	0
Dicentra uniflora	0.003301	0	0
Eriophyllum lanatum	0.002116	0	0
Erysimum asperum	0.000846	0	0
Amelanchier alnifolia	0.002708	0	0
Hypericum perforatum	0.002116	0	0
Carex sp X	0.015234	0	0
Holodiscus dumosus	0.052896	0	0
Achillea millefolium	0.046689	0	0

***Eristalis hirtus* M2**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.58E-01	0.04125	0.261
Angelica arguta	1.42E-01	0.03875	0.274
Aquilegia formosa	6.30E-03	0	0.000
Carex sp.	3.27E-05	0	0.000
Castilleja hispida	1.55E-03	0	0.000
Cerastium arvense	2.76E-04	0	0.000
Cirsium callilepis	4.84E-03	0	0.000
Delphinium nuttallianum	9.21E-03	0	0.000
Erigeron aliceae & foliosus	5.76E-03	0.0125	2.171
Eriogonum nudum	1.62E-03	0	0.000
Eriophyllum lanatum	1.98E-02	0.17	8.594
Erysimum asperum	1.13E-02	0	0.000
Gayophytum humile	2.04E-03	0	0.000
Gilia capitata	1.13E-02	0.4975	44.192

<i>Lathyrus nevadensis</i>	2.78E-04	0	0.000
<i>Ligusticum grayi</i>	3.65E-01	0.21125	0.579
<i>Lupinus laxiflorus</i>	1.33E-02	0	0.000
<i>Mimulus moschatus & guttatus</i>	1.47E-04	0	0.000
<i>Orthocarpus imbricatus</i>	3.13E-02	0	0.000
<i>Phacelia hastata</i>	1.06E-02	0	0.000
<i>Phlox gracilis</i>	5.82E-03	0.00125	0.215
<i>Polemonium carneum</i>	4.48E-04	0	0.000
<i>Potentilla gracilis</i>	1.04E-02	0	0.000
<i>Rumex acetosella</i>	6.76E-02	0	0.000
<i>Silene douglasii</i>	4.90E-05	0	0.000
<i>Solidago canadensis</i>	1.12E-02	0	0.000
<i>Symphoricarpos mollis</i>	2.71E-03	0	0.000
<i>Vicia americana</i>	3.90E-03	0	0.000
<i>Arenaria capillaris</i>	2.80E-04	0	0.000
<i>Collinsia parviflora</i>	2.82E-03	0	0.000
<i>Mimulus guttatus</i>	2.98E-04	0.00125	4.201
<i>Mimulus breweri</i>	1.23E-03	0	0.000
<i>Mimulus tilingii</i>	1.02E-03	0	0.000
<i>Sagina saginoides</i>	3.27E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.04E-03	0.01125	10.786
<i>Aster ledophyllum</i>	4.25E-04	0	0.000
<i>Agoseris aurantiaca</i>	3.27E-05	0	0.000

Phlox diffusa	3.27E-05	0	0.000
Stellaria crispa	2.65E-04	0	0.000
Lotus micranthus	5.26E-04	0	0.000
Navarretia divaricata	1.43E-03	0	0.000
Polygonum minimum	1.96E-04	0	0.000
Campanula scouleri	3.27E-05	0	0.000
Perideridia gairdneri	1.91E-02	0	0.000
Barbarea orthoceras	5.89E-04	0	0.000
Eriogonum umbellatum	1.29E-03	0.0025	1.936
Mimulus moschatus	6.87E-05	0	0.000
Lithophragma parviflora	6.54E-05	0	0.000
Lewisia triphylla	6.87E-05	0	0.000
Polygonum douglasii	7.62E-05	0	0.000
Lomatium martindalei	5.72E-03	0	0.000
Eriogonum compositum	6.50E-02	0.0125	0.192
Holodiscus dumosus	6.18E-04	0	0.000
Saxifraga occidentalis	1.62E-03	0	0.000

***Eristalis hirtus* NE**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.072781	0	0
Agoseris heterophylla	0.000991	0	0
Anaphalis margaritacea	0.029046	0	0
Calochortus subalpinus	0.00085	0	0
Carex sp.	0.000142	0	0
Castilleja hispida	0.023185	0	0
Cirsium callilepis	0.016073	0.333333	20.73812

Collinsia parviflora	0.004957	0	0
Delphinium nuttallianum	0.002832	0	0
Erigeron aliceae & foliosus	0.0109	0	0
Eriogonum nudum	0.001275	0	0
Eriogonum umbellatum	0.059351	0	0
Eriophyllum lanatum	0.049995	0.380952	7.619836
Erysimum asperum	0.016923	0	0
Gilia capitata	0.010791	0.285714	26.47668
Ligusticum grayi	0.388171	0	0
Lupinus laxiflorus	0.029325	0	0
Orthocarpus imbricatus	0.067459	0	0
Phacelia hastata	0.018941	0	0
Phlox gracilis	0.00337	0	0
Rumex acetosella	0.032134	0	0
Gayophytum humile	0.000566	0	0
Mimulus breweri	0.001275	0	0
Potentilla gracilis	0.002124	0	0
Aster ledophyllum	0.000283	0	0
Drymocallis glandulosa	0.001119	0	0
Dodecatheon alpinum	0.000283	0	0
Vicia americana	0.000283	0	0
Penstemon procerus	0.005452	0	0
Campanula scouleri	0.000283	0	0
Galium oreganum	0.001629	0	0
Penstemon cardwellii	0.000708	0	0
Eriogonum compositum	0.056717	0	0
Lomatium martindalei	0.009417	0	0
Sedum spathulifolium	0.000991	0	0
Epilobium oregonense	0.001133	0	0
Barbarea orthoceras	0.002053	0	0
Holodiscus dumosus	0.07619	0	0

Eristalis hirtus RP1

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.58E-01	0.490196	1.368
Agoseris heterophylla	7.61E-03	0	0.000
Angelica arguta	2.39E-04	0	0.000

<i>Calochortus subalpinus</i>	2.79E-03	0	0.000
<i>Castilleja hispida</i>	6.03E-02	0	0.000
<i>Cerastium arvense</i>	2.11E-03	0	0.000
<i>Cirsium callilepis</i>	3.98E-04	0	0.000
<i>Clarkia amoena</i>	2.12E-03	0	0.000
<i>Eriogonum compositum</i>	8.89E-02	0.058824	0.662
<i>Eriogonum nudum</i>	9.83E-02	0	0.000
<i>Eriogonum umbellatum</i>	5.81E-02	0	0.000
<i>Eriophyllum lanatum</i>	3.45E-02	0.333333	9.669
<i>Gilia capitata</i>	4.23E-02	0.117647	2.779
<i>Lupinus laxiflorus</i>	3.15E-02	0	0.000
<i>Orthocarpus imbricatus</i>	1.21E-02	0	0.000
<i>Rumex acetosella</i>	5.84E-02	0	0.000
<i>Vicia americana</i>	2.53E-03	0	0.000
<i>Lithophragma tenellum</i>	2.94E-04	0	0.000
<i>Arenaria capillaris</i>	4.33E-03	0	0.000
<i>Penstemon procerus</i>	6.92E-03	0	0.000
<i>Phlox gracilis</i>	1.11E-02	0	0.000
<i>Collinsia parviflora</i>	2.23E-03	0	0.000
<i>Gayophytum humile</i>	2.08E-03	0	0.000
<i>Lathyrus nevadensis</i>	6.05E-04	0	0.000
<i>Mimulus guttatus</i>	7.96E-05	0	0.000
<i>Navarretia divaricata</i>	1.89E-03	0	0.000

<i>Stellaria crispa</i>	9.55E-04	0	0.000
<i>Mimulus breweri</i>	3.23E-03	0	0.000
<i>Hypericum perforatum</i>	1.21E-02	0	0.000
<i>Epilobium oregonense</i>	6.21E-04	0	0.000
<i>Galium aparine</i>	7.96E-05	0	0.000
<i>Acmispon nevadensis</i>	7.15E-03	0	0.000
<i>Senecio integerrimus</i>	7.96E-05	0	0.000
<i>Delphinium nuttallianum</i>	9.15E-04	0	0.000
<i>Phlox diffusa</i>	4.85E-04	0	0.000
<i>Erysimum asperum</i>	1.28E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.57E-04	0	0.000
<i>Ranunculus uncinatus</i>	3.18E-04	0	0.000
<i>Madia minima</i>	1.62E-03	0	0.000
<i>Polygonum minimum</i>	2.39E-04	0	0.000
<i>Zigadenus venenosus</i>	3.93E-03	0	0.000
<i>Comandra umbellata</i>	3.18E-04	0	0.000
<i>Lotus micranthus</i>	9.55E-04	0	0.000
<i>Phacelia hastata</i>	4.77E-04	0	0.000
<i>Potentilla gracilis</i>	4.77E-04	0	0.000
<i>Lomatium martindalei</i>	2.17E-02	0	0.000
<i>Lomatium triternatum</i>	3.58E-02	0	0.000
<i>Ligusticum grayi</i>	1.24E-02	0	0.000
<i>Saxifraga occidentalis</i>	1.99E-03	0	0.000

Anaphalis margaritacea	2.39E-03	0	0.000
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Eristalis hirtus RP2

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.19E-01	0.019355	0.088
Acmispon nevadensis	1.31E-02	0	0.000
Calochortus subalpinus	1.76E-03	0	0.000
Castilleja hispida	4.24E-02	0	0.000
Cirsium callilepis	1.72E-03	0	0.000
Collinsia parviflora	2.24E-03	0	0.000
Eriogonum nudum	1.40E-01	0.009677	0.069
Eriogonum umbellatum	1.77E-01	0.012903	0.073
Eriophyllum lanatum	2.55E-02	0.933871	36.612
Erysimum asperum	1.45E-03	0	0.000
Gilia capitata	2.50E-02	0.019355	0.773
Hypericum perforatum	5.83E-03	0	0.000
Lupinus laxiflorus	2.57E-02	0	0.000
Orthocarpus imbricatus	1.29E-03	0	0.000
Penstemon procerus	8.62E-04	0	0.000
Rumex acetosella	3.05E-02	0	0.000
Silene douglasii	8.01E-03	0	0.000
Agoseris heterophylla	3.08E-03	0	0.000
Arenaria capillaris	1.04E-03	0	0.000
Arenaria macrophylla	1.46E-04	0	0.000

<i>Phlox gracilis</i>	1.03E-02	0	0.000
<i>Viola orbiculata</i>	6.63E-05	0	0.000
<i>Clarkia amoena</i>	2.01E-03	0.003226	1.606
<i>Rosa gymnocarpa</i>	6.63E-05	0	0.000
<i>Vicia americana</i>	1.15E-03	0	0.000
<i>Gayophytum humile</i>	3.65E-04	0	0.000
<i>Mimulus breweri</i>	8.68E-04	0	0.000
<i>Epilobium angustifolium</i>	6.63E-05	0	0.000
<i>Delphinium nuttallianum</i>	4.97E-04	0	0.000
<i>Navarretia divaricata</i>	3.98E-04	0	0.000
<i>Symphoricarpos mollis</i>	5.47E-03	0	0.000
<i>Aster ledophyllus</i>	1.33E-04	0	0.000
<i>Haplopappus hallii</i>	6.63E-05	0	0.000
<i>Cerastium arvense</i>	6.63E-05	0	0.000
<i>Drymocallis glandulosa</i>	1.99E-04	0	0.000
<i>Epilobium oregonense</i>	2.65E-04	0	0.000
<i>Lathyrus nevadensis</i>	3.31E-04	0	0.000
<i>Polygonum douglasii</i>	9.94E-05	0	0.000
<i>Zigadenus venenosus</i>	3.43E-03	0.001613	0.471
<i>Eriogonum compositum</i>	2.17E-01	0	0.000
<i>Lomatium triternatum</i>	1.12E-02	0	0.000
<i>Anaphalis margaritacea</i>	2.25E-03	0	0.000
<i>Lomatium martindalei</i>	3.08E-03	0	0.000

Ribes viscosissimum	9.28E-04	0	0.000
Ligusticum grayi	9.68E-03	0	0.000
Phlox diffusa	3.98E-03	0	0.000

***Eristalis hirtus* LM**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	3.22E-01	0.04028	0.125
Calochortus subalpinus	2.03E-03	0	0.000
Carex sp.	2.03E-04	0	0.000
Castilleja hispida	3.70E-02	0	0.000
Cirsium callilepis	4.07E-04	0	0.000
Claytonia lanceolata	4.07E-04	0	0.000
Collinsia parviflora	4.00E-03	0	0.000
Delphinium nuttallianum	8.99E-03	0	0.000
Erigeron aliceae & foliosus	3.43E-03	0	0.000
Eriophyllum lanatum	2.36E-02	0.187391	7.940
Lathyrus nevadensis	3.15E-03	0	0.000
Ligusticum grayi	1.33E-01	0.001751	0.013
Mimulus moschatus & guttatus	5.99E-04	0	0.000
Montia parvifolia	5.06E-03	0	0.000
Montia siberica	4.07E-04	0	0.000
Orthocarpus imbricatus	3.99E-02	0	0.000
Orthocarpus imbricatus	6.78E-05	0	0.000
Penstemon procerus	1.82E-02	0	0.000

<i>Phlox gracilis</i>	2.02E-02	0	0.000
<i>Potentilla gracilis</i>	2.29E-02	0.010508	0.459
<i>Rumex acetosella</i>	1.92E-02	0	0.000
<i>Sedum stenopetalum</i>	1.36E-04	0	0.000
<i>Solidago canadensis</i>	4.75E-02	0.021016	0.443
<i>Vicia americana</i>	5.75E-03	0	0.000
<i>Mimulus guttatus</i>	8.32E-03	0.003503	0.421
<i>Mimulus breweri</i>	5.31E-03	0	0.000
<i>Drymocallis glandulosa</i>	1.22E-02	0.056042	4.585
<i>Arenaria capillaris</i>	8.81E-04	0	0.000
<i>Epilobium oregonense</i>	3.17E-03	0	0.000
<i>Mimulus tilingii</i>	5.06E-03	0	0.000
<i>Convolvulus nyctagineus</i>	6.78E-05	0	0.000
<i>Cerastium arvense</i>	2.71E-04	0	0.000
<i>Saxifraga occidentalis</i>	6.78E-05	0	0.000
<i>Platanthera dilatata</i>	6.78E-05	0	0.000
<i>Lewisia triphylla</i>	1.36E-04	0	0.000
<i>Mimulus moschatus</i>	2.32E-03	0	0.000
<i>Erysimum asperum</i>	2.71E-04	0	0.000
<i>Gayophytum humile</i>	7.46E-05	0	0.000
<i>Aquilegia formosa</i>	5.02E-04	0	0.000
<i>Lupinus laxiflorus</i>	1.97E-02	0	0.000
<i>Symporicarpos mollis</i>	2.03E-04	0	0.000

Angelica arguta	8.64E-02	0	0.000
Hypericum perforatum	2.03E-04	0	0.000
Zigadenus venenosus	2.84E-02	0.542907	19.096
Perideridia gairdneri	5.12E-02	0.136602	2.670
Stachys cooleyae	3.39E-04	0	0.000
Boykinia major	3.39E-04	0	0.000
Senecio triangularis	6.78E-04	0	0.000
Polemonium carneum	1.73E-03	0	0.000
Saxifraga oregana	1.23E-02	0	0.000
Comandra umbellata	5.20E-04	0	0.000
Eriogonum nudum	5.42E-04	0	0.000
Eriogonum compositum	1.80E-02	0	0.000
Eriogonum umbellatum	2.03E-02	0	0.000
Arenaria macrophylla	2.03E-03	0	0.000

***Eristalis hirtus* LB**

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	0.022235	0	0
Boykinia major	0.324468	0	0
Carex sp.	0.013402	0	0
Castilleja hispida	0.000307	0	0
Dodecatheon jeffreyi	0.003536	0	0
Epilobium oregonense	0.002454	0	0
Eriophyllum lanatum	0.002607	0	0
Heracleum maximum	0.021468	0	0
Hypericum anagalloides	0.002046	0	0
Ligusticum grayi	0.359084	0.37037	1.03143
Lupinus laxiflorus	0.011961	0	0

Mimulus moschatus & guttatus	0.002147	0	0
Mitella pentandra	0.001635	0	0
Platanthera dilatata	0.010428	0	0
Scirpus sp.	0.002147	0	0
Senecio triangularis	0.042998	0	0
Solidago canadensis	0.02659	0	0
Stachys cooleyae	0.020999	0	0
Vicia americana	0.011072	0	0
Dodecatheon alpinum	0.023309	0	0
Mertensia bella	0.000613	0	0
Mimulus tilingii	0.006134	0	0
Phlox gracilis	0.000307	0	0
Prunella vulgaris	0.000307	0	0
Senecio integerrimus	0.00963	0.62963	65.38122
Mimulus moschatus	0.000859	0	0
Collinsia grandiflora	0.001472	0	0
Potentilla gracilis	0.001533	0	0
Mimulus guttatus	0.001874	0	0
Cerastium arvense	0.00092	0	0
Penstemon procerus	0.001227	0	0
Eriogonum umbellatum	0.004907	0	0
Angelica arguta	0.012268	0	0
Carex sp X	0.009201	0	0
Anaphalis margaritacea	0.022389	0	0
Perideridia gairdneri	0.021468	0	0

Eristalis hirtus LO

Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	1.75E-01	0.060241	0.344
Castilleja hispida	1.35E-02	0	0.000
Cirsium callilepis	1.59E-03	0	0.000
Collinsia parviflora	2.16E-03	0	0.000
Delphinium nuttallianum	8.70E-04	0	0.000
Epilobium oregonense	1.44E-03	0	0.000

<i>Erigeron aliceae & foliosus</i>	3.51E-03	0.024096	6.870
<i>Eriogonum compositum</i>	1.84E-01	0.036145	0.196
<i>Eriogonum nudum</i>	2.00E-01	0.048193	0.241
<i>Eriogonum umbellatum</i>	1.31E-01	0	0.000
<i>Eriophyllum lanatum</i>	1.79E-02	0.337349	18.852
<i>Fragaria virginiana</i>	2.56E-04	0	0.000
<i>Gayophytum humile</i>	3.74E-03	0	0.000
<i>Gilia capitata</i>	3.51E-02	0.301205	8.569
<i>Heracleum maximum</i>	1.60E-03	0	0.000
<i>Hypericum perforatum</i>	3.98E-02	0.060241	1.513
<i>Lathyrus nevadensis</i>	1.15E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.62E-02	0	0.000
<i>Lupinus laxiflorus</i>	3.84E-04	0	0.000
<i>Montia parvifolia</i>	2.56E-04	0	0.000
<i>Montia siberica</i>	1.13E-03	0	0.000
<i>Mycelis muralis</i>	1.28E-04	0	0.000
<i>Navarretia divaricata</i>	1.38E-03	0	0.000
<i>Penstemon cardwellii</i>	1.28E-04	0	0.000
<i>Phlox gracilis</i>	5.62E-03	0	0.000
<i>Potentilla gracilis</i>	1.54E-03	0	0.000
<i>Rumex acetosella</i>	3.65E-02	0.120482	3.297
<i>Tiarella trifoliata</i>	5.12E-04	0	0.000
<i>Vicia americana</i>	2.30E-03	0	0.000

<i>Arenaria capillaris</i>	1.41E-04	0	0.000
<i>Calochortus subalpinus</i>	1.02E-03	0	0.000
<i>Drymocallis glandulosa</i>	5.31E-03	0	0.000
<i>Agoseris heterophylla</i>	5.06E-03	0	0.000
<i>Aster ledophyllum</i>	8.26E-04	0.012048	14.592
<i>Hieracium cynoglossoides</i>	6.40E-05	0	0.000
<i>Lithophragma parviflora</i>	3.20E-04	0	0.000
<i>Silene douglasii</i>	3.20E-04	0	0.000
<i>Mimulus breweri</i>	5.44E-04	0	0.000
<i>Dichelostemma congestum</i>	1.43E-03	0	0.000
<i>Galium oreganum</i>	6.40E-05	0	0.000
<i>Saxifraga occidentalis</i>	4.90E-03	0	0.000
<i>Boykinia major</i>	6.40E-05	0	0.000
<i>Campanula scouleri</i>	4.48E-04	0	0.000
<i>Cerastium arvense</i>	5.44E-04	0	0.000
<i>Mimulus moschatus</i>	6.40E-05	0	0.000
<i>Taraxacum officinale</i>	6.40E-05	0	0.000
<i>Polemonium carneum</i>	7.68E-05	0	0.000
<i>Mimulus guttatus</i>	9.60E-05	0	0.000
<i>Sedum spathulifolium</i>	1.02E-04	0	0.000
<i>Penstemon procerus</i>	1.69E-03	0	0.000
<i>Stellaria crispa</i>	1.33E-02	0	0.000
<i>Lomatium martindalei</i>	1.86E-02	0	0.000

Erysimum asperum	1.09E-03	0	0.000
Acmispon nevadensis	2.29E-03	0	0.000
Sibbaldia procumbens	5.14E-04	0	0.000
Circaeа alpina	7.04E-04	0	0.000
Senecio triangularis	3.20E-04	0	0.000
Holodiscus dumosus	1.82E-02	0	0.000
Polygonum douglasii	3.84E-04	0	0.000
Zigadenus venenosus	2.08E-03	0	0.000
Anaphalis margaritacea	1.28E-03	0	0.000
Ligusticum grayi	2.93E-02	0	0.000

***Eristalis hirtus* LS**

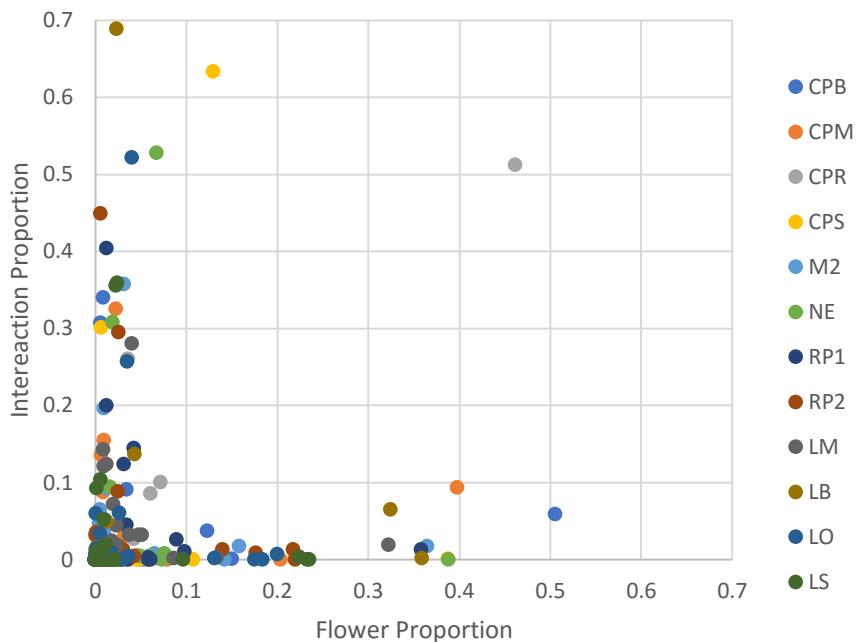
Flw Spp	Flw Prop	Int Prop	Pref Score
Achillea millefolium	2.35E-01	0	0.000
Acmispon nevadensis	2.66E-03	0	0.000
Agoseris heterophylla	5.54E-03	0	0.000
Calochortus subalpinus	1.55E-03	0	0.000
Castilleja hispida	1.14E-02	0	0.000
Cerastium arvense	1.03E-02	0	0.000
Cirsium callilepis	1.03E-03	0	0.000
Collinsia parviflora	4.49E-03	0	0.000
Dichelostemma congestum	4.02E-03	0	0.000
Drymocallis glandulosa	3.33E-03	0.142857	42.952
Eriogonum compositum	2.24E-01	0	0.000

<i>Eriogonum nudum</i>	9.69E-02	0	0.000
<i>Eriogonum umbellatum</i>	2.33E-01	0	0.000
<i>Eriophyllum lanatum</i>	1.88E-02	0.142857	7.613
<i>Gilia capitata</i>	2.26E-02	0.571429	25.291
<i>Hypericum perforatum</i>	9.22E-03	0	0.000
<i>Lathyrus nevadensis</i>	4.08E-04	0	0.000
<i>Lomatium martindalei</i>	2.31E-03	0	0.000
<i>Lupinus laxiflorus</i>	2.43E-02	0	0.000
<i>Mimulus breweri</i>	1.98E-03	0	0.000
<i>Mimulus moschatus & guttatus</i>	2.17E-04	0	0.000
<i>Montia parvifolia</i>	2.35E-04	0	0.000
<i>Phlox gracilis</i>	5.31E-03	0	0.000
<i>Potentilla gracilis</i>	1.10E-03	0	0.000
<i>Rumex acetosella</i>	1.12E-02	0	0.000
<i>Silene douglasii</i>	1.63E-04	0	0.000
<i>Vicia americana</i>	2.23E-03	0	0.000
<i>Iris chrysophylla</i>	5.43E-05	0	0.000
<i>Mimulus tilingii</i>	2.41E-03	0	0.000
<i>Stellaria crispa</i>	9.13E-04	0	0.000
<i>Campanula scouleri</i>	5.43E-05	0	0.000
<i>Galium oreganum</i>	2.99E-04	0	0.000
<i>Ranunculus uncinatus</i>	5.43E-05	0	0.000
<i>Viola orbiculata</i>	2.45E-04	0	0.000

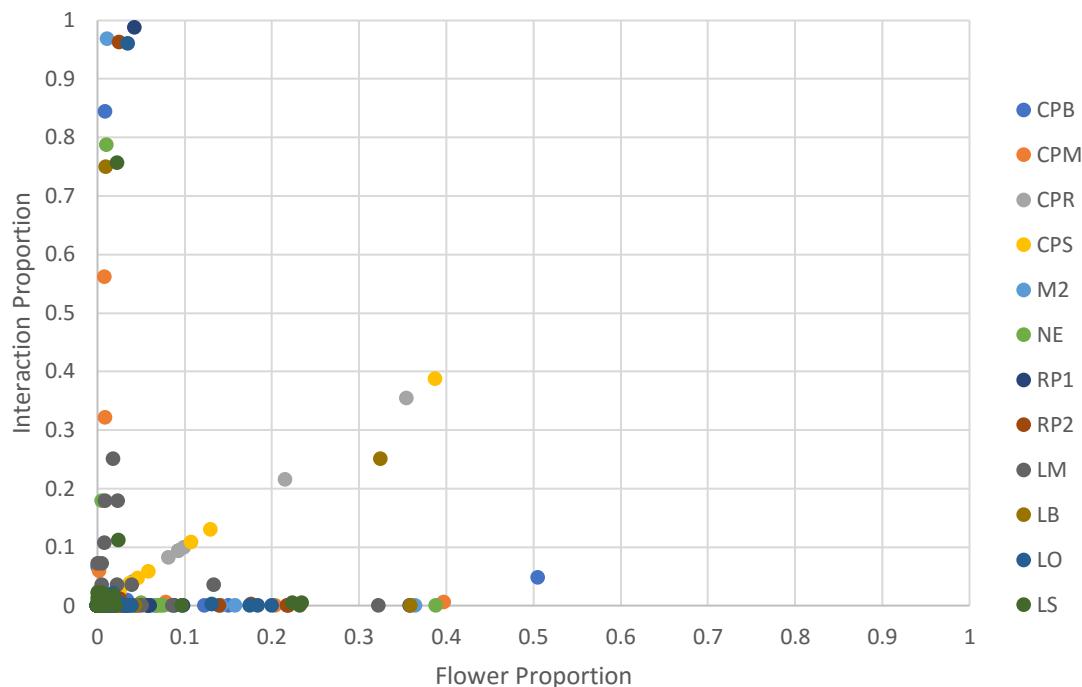
<i>Gayophytum humile</i>	4.62E-04	0	0.000
<i>Mimulus moschatus</i>	5.49E-04	0	0.000
<i>Taraxacum officinale</i>	5.43E-05	0	0.000
<i>Arenaria capillaris</i>	8.15E-05	0	0.000
<i>Delphinium nuttallianum</i>	1.09E-04	0	0.000
<i>Penstemon procerus</i>	7.79E-03	0	0.000
<i>Zigadenus venenosus</i>	1.85E-03	0.142857	77.313
<i>Lomatium triternatum</i>	1.90E-04	0	0.000
<i>Penstemon cardwellii</i>	1.90E-04	0	0.000
<i>Navarretia divaricata</i>	5.43E-04	0	0.000
<i>Solidago canadensis</i>	5.43E-04	0	0.000
<i>Sedum spathulifolium</i>	5.43E-04	0	0.000
<i>Anaphalis margaritacea</i>	2.09E-02	0	0.000
<i>Ligusticum grayi</i>	2.13E-02	0	0.000
<i>Erigeron aliceae & foliosus</i>	8.15E-03	0	0.000

Appendix B: Flower Proportion vs. Interaction proportion Scatterplots

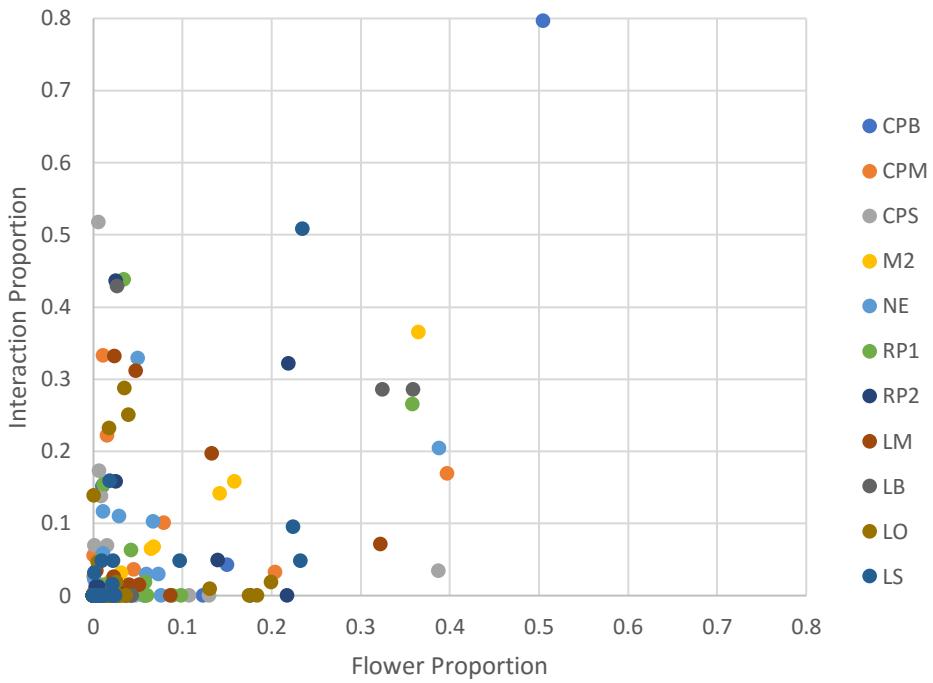
Flower Proportion vs. Interaction Proportion for *Bombus mixtus*, 2011-2015



Flower Proportion vs. Interaction Proportion for *Bombylius*
major, 2011-2015



Flower Proportion vs. Interaction Proportion for
Epicauta puncticollis, 2011-2015



Flower Proportion vs. Interaction Proportion for *Eristalis hirtus*, 2011-2015

