

# Tutorial 12: nMDS and PERMANOVA

ENVX2001 – Applied Statistical Methods

Semester 1

## PERMANOVA, SIMPER and nMDS Analysis

We are going to use the same dataset as last tutorial, but do very different analyses.

### Setup

To do these in R, you need to use the vegan package, so first load it and the MASS package:

```
CODE
library(vegan)
library(MASS)
library(ggplot2)
```

### Load the data

Next load the bird data:

```
CODE
Birds ← read.csv("data/macnally.csv", header = TRUE)
```

### Transform the data

Let's transform the data using a fourth-root transformation:

```
CODE
TransBirdsData ← (Birds[, 3:104])^(1/4)
```

### Bray-Curtis Dissimilarity Matrix

Now let's generate a Bray-Curtis dissimilarity matrix on this data and perform a nMDS. Note this data has already been standardised.

CODE

```
Bird.dis <- vegdist(TransBirdsData, method = "bray")
```

## nMDS Ordination

Let's plot the nMDS and label with Habitat Type:

CODE

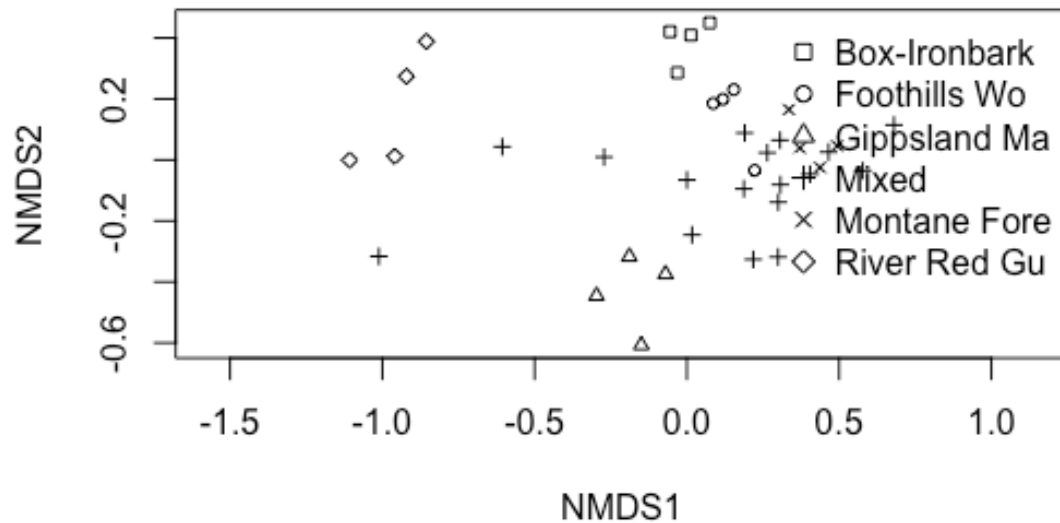
```
pchs <- c(0:5)
Bird_Factor <- factor(Birds$HABITAT)
nMDS_Bird <- metaMDS(TransBirdsData, distance = "bray", k = 2)
```

OUTPUT

```
Run 0 stress 0.1112209
Run 1 stress 0.1368302
Run 2 stress 0.1112209
... Procrustes: rmse 5.373717e-05 max resid 0.0002544127
... Similar to previous best
Run 3 stress 0.129877
Run 4 stress 0.1181205
Run 5 stress 0.111221
... Procrustes: rmse 8.727098e-05 max resid 0.0004126074
... Similar to previous best
Run 6 stress 0.1181205
Run 7 stress 0.1112209
... Procrustes: rmse 7.558244e-06 max resid 3.080781e-05
... Similar to previous best
Run 8 stress 0.129877
Run 9 stress 0.1112209
... Procrustes: rmse 4.061744e-05 max resid 0.0001923771
... Similar to previous best
Run 10 stress 0.1112209
... New best solution
... Procrustes: rmse 8.351695e-07 max resid 3.115428e-06
... Similar to previous best
Run 11 stress 0.1181205
Run 12 stress 0.1268505
Run 13 stress 0.1112209
... Procrustes: rmse 5.560587e-05 max resid 0.0002631007
... Similar to previous best
Run 14 stress 0.1181205
Run 15 stress 0.1389816
Run 16 stress 0.129877
Run 17 stress 0.1112209
... Procrustes: rmse 5.15084e-06 max resid 2.466948e-05
... Similar to previous best
Run 18 stress 0.1112209
... Procrustes: rmse 2.140732e-05 max resid 0.0001003622
... Similar to previous best
Run 19 stress 0.1112209
... Procrustes: rmse 4.55047e-05 max resid 0.000214183
... Similar to previous best
Run 20 stress 0.1112209
... Procrustes: rmse 1.282332e-05 max resid 5.941938e-05
... Similar to previous best
*** Best solution repeated 6 times
```

CODE

```
plot_Bird <- ordiplot(nMDS_Bird, display = "sites", type = "n")
points(nMDS_Bird, col = "black", pch = pchs[Bird_Factor])
legend("topright", bty = "n", legend = levels(Bird_Factor), pch = pchs)
```



CODE

```
nMDS_Bird
```

OUTPUT

```
Call:
metaMDS(comm = TransBirdsData, distance = "bray", k = 2)

global Multidimensional Scaling using monoMDS

Data:      TransBirdsData
Distance: bray

Dimensions: 2
Stress:    0.1112209
Stress type 1, weak ties
Best solution was repeated 6 times in 20 tries
The best solution was from try 10 (random start)
Scaling: centring, PC rotation, halfchange scaling
Species: expanded scores based on 'TransBirdsData'
```

## ANOSIM

Let's do an ANOSIM, using Habitat as the Factor:

#### CODE

```
Bird.anosim <- with(TransBirdsData, anosim(Bird.dis, Birds$HABITAT))
summary(Bird.anosim)
```

#### OUTPUT

```
Call:
anosim(x = Bird.dis, grouping = Birds$HABITAT)
Dissimilarity: bray

ANOSIM statistic R: 0.3936
Significance: 0.002

Permutation: free
Number of permutations: 999

Upper quantiles of permutations (null model):
 90%  95% 97.5%  99%
0.142 0.205 0.269 0.306

Dissimilarity ranks between and within classes:
      0%   25%   50%   75% 100%  N
Between    1 224.25 380.5 520.25 665 500
Box-Ironbark 6  22.50  29.5  45.50   78   6
Foothills Wo 10 47.00  54.0  71.50  145   6
Gippsland Ma 51 72.25  90.0  95.00  130   6
Mixed        4 124.00 220.5 410.25  666 136
Montane Fore 3  17.75  54.5  87.50   97   6
River Red Gu 12 33.75  96.5 179.50  227   6
```

## PERMANOVA

Let's do a PERMANOVA, with HABITAT as a factor. PERMANOVA is called `adonis` in the `vegan` package. Note `adonis` is being replaced by `adonis2`, which is basically the same.

#### CODE

```
adonis2(TransBirdsData ~ HABITAT, data = Birds, permutations = 999)
```

#### OUTPUT

```
Permutation test for adonis under reduced model
Permutation: free
Number of permutations: 999

adonis2(formula = TransBirdsData ~ HABITAT, data = Birds, permutations = 999)
      Df SumOfSqs      R2      F Pr(>F)
Model    5   2.2749 0.50098 6.2245  0.001 ***
Residual 31   2.2660 0.49902
Total    36   4.5409 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

## Pairwise Comparisons

If we find an overall significant p-value, we need to see which level is significant from which other level. Here we can do pairwise tests (a bit like post-hoc tests in ANOVAs), with the p-value adjusted with a Bonferroni correction.

To do the pairwise tests, there is a new R command on GitHub. Note the first time you do this, you need to first install Rtools from [here](#).

CODE

```
library(devtools)
install_github("pmartinezarbizu/pairwiseAdonis/pairwiseAdonis")
```

CODE

```
library(pairwiseAdonis)
pairwise.adonis(TransBirdsData, Birds$HABITAT)
```

## SIMPER Analysis

To see what species are contributing to the differences between the vegetation communities, we can use a SIMPER analysis (Similarity Percentages):

CODE

```
Birdsim <- simper(TransBirdsData, Birds$HABITAT)
summary(Birdsim)
```

OUTPUT

Contrast: Mixed\_Gippsland Ma

	average	sd	ratio	ava	avb	cumsum	p	
V17WPHE	0.019779	0.011557	1.711400	0.602000	2.247700	0.040	0.001	***
V34WSW	0.018979	0.007112	2.668500	0.247500	1.856000	0.079	0.001	***
V11CR	0.016850	0.007496	2.247800	1.443400	0.000000	0.114	0.001	***
V6WTR	0.015456	0.006359	2.430500	1.325800	0.000000	0.145	0.001	***
V15STTH	0.014940	0.009012	1.657800	1.475400	0.323400	0.176	0.003	**
V25WAG	0.013966	0.005802	2.407300	0.205100	1.376000	0.204	0.002	**
V27NHHE	0.012769	0.008435	1.513800	0.689200	1.646300	0.231	0.030	*
V3GF	0.012483	0.008488	1.470700	1.569300	0.646500	0.256	0.002	**
V4BTH	0.011472	0.009944	1.153700	1.946400	1.184200	0.280	0.116	
V36YFHE	0.010708	0.008006	1.337500	1.121400	1.243700	0.302	0.100	.
V42SIL	0.010651	0.008608	1.237400	0.952800	0.420400	0.323	0.026	*
V13RWB	0.010585	0.007337	1.442700	1.080500	1.922100	0.345	0.159	
V33RWH	0.010302	0.006859	1.501900	1.318700	0.579800	0.366	0.025	*
V5GWH	0.010203	0.008334	1.224100	1.325200	0.674800	0.387	0.011	*
V16LR	0.009557	0.008123	1.176500	0.852900	1.184900	0.407	0.125	
V65LWB	0.009521	0.009391	1.013900	0.258700	0.741500	0.426	0.047	*
V21ESP	0.009484	0.007739	1.225400	1.236300	0.644000	0.445	0.147	
V23RBT	0.009142	0.006803	1.343900	0.990600	0.937700	0.464	0.264	
V63DWS	0.008333	0.007483	1.113600	0.313100	0.724800	0.481	0.019	*
V35STP	0.008318	0.007536	1.103700	0.700100	0.993200	0.498	0.350	
V7WEHE	0.008195	0.007490	1.094100	1.252500	1.241500	0.515	0.158	
V91NMN	0.008158	0.007918	1.030300	0.103300	0.719700	0.532	0.036	*
V19ER	0.007905	0.006671	1.184900	0.816000	1.308600	0.548	0.390	

V29CST	0.007715	0.005456	1.414100	0.548200	1.059100	0.564	0.077	.
V56FTC	0.007610	0.006779	1.122500	0.948600	0.615700	0.579	0.114	
V14AUR	0.007440	0.007024	1.059200	0.893600	0.962100	0.594	0.164	
V81SHBC	0.007124	0.006361	1.120000	0.641600	0.271900	0.609	0.103	
V28VS	0.007070	0.008926	0.792000	0.599300	0.000000	0.624	0.911	
V12LK	0.006733	0.005709	1.179300	1.372500	0.801000	0.637	0.014	*
V80RF	0.006689	0.007273	0.919800	0.568000	0.000000	0.651	0.238	
V50CHE	0.006645	0.008280	0.802400	0.580200	0.000000	0.664	0.313	
V46BHHE	0.006634	0.006911	0.959900	0.491200	0.307900	0.678	0.958	
V9SFW	0.006024	0.006604	0.912200	1.384400	1.734700	0.690	0.367	
V48YTBC	0.005842	0.007167	0.815200	0.511500	0.000000	0.702	0.386	
V41SPP	0.005728	0.005620	1.019200	1.058800	1.200500	0.714	0.721	
V8WNHE	0.005294	0.006131	0.863400	1.588600	1.843200	0.725	0.815	
V24BFCS	0.005165	0.005210	0.991300	0.751600	1.112500	0.736	0.569	
V37WHIP	0.005130	0.007087	0.723800	0.441900	0.000000	0.746	0.489	
V83SFC	0.005026	0.007077	0.710200	0.424600	0.000000	0.756	0.687	
V43GCU	0.004955	0.006908	0.717300	0.423100	0.000000	0.766	0.951	
V32SCC	0.004898	0.010846	0.451600	0.441300	0.000000	0.776	0.808	
V20PCU	0.004806	0.006607	0.727400	0.411800	0.000000	0.786	0.949	
V38GAL	0.004767	0.007107	0.670700	0.178700	0.323400	0.796	0.587	
V87LFC	0.004719	0.006574	0.717800	0.224900	0.289600	0.806	0.137	
V10WBSW	0.004538	0.005738	0.791000	1.426000	1.760400	0.815	0.996	
V2EYR	0.004523	0.005813	0.778100	1.285300	1.599500	0.824	0.859	
V53MB	0.004509	0.006393	0.705200	0.224200	0.250000	0.833	0.428	
V31AMAG	0.004040	0.007500	0.538600	0.370900	0.000000	0.842	0.778	
V55LHE	0.004024	0.006359	0.632900	0.354900	0.000000	0.850	0.468	
V45MGLK	0.003945	0.005906	0.668000	0.142600	0.271900	0.858	0.528	
V69SKF	0.003692	0.005819	0.634500	0.334500	0.000000	0.866	0.939	
V70RSL	0.003469	0.005750	0.603200	0.094600	0.236400	0.873	0.680	
V49LYRE	0.003229	0.005942	0.543500	0.268000	0.000000	0.879	0.646	
V85ROSE	0.002816	0.005168	0.545000	0.239700	0.000000	0.885	0.473	
V39FHE	0.002732	0.007692	0.355200	0.248500	0.000000	0.891	0.840	
V68PIL	0.002684	0.005897	0.455200	0.232900	0.000000	0.896	0.652	
V44MUSK	0.002563	0.007101	0.361000	0.236300	0.000000	0.901	0.734	
V98FLAME	0.002557	0.005598	0.456700	0.220500	0.000000	0.907	0.712	
V51OWH	0.002408	0.005315	0.453100	0.211500	0.000000	0.911	0.410	
V16ST	0.002323	0.001704	1.363300	1.466600	1.493300	0.916	0.284	
V22SCR	0.002318	0.005111	0.453500	0.210400	0.000000	0.921	0.999	
V52TRM	0.002247	0.006427	0.349700	0.202800	0.000000	0.926	0.704	
V47RFC	0.002229	0.004899	0.455000	0.214300	0.000000	0.930	0.872	
V30BTR	0.002214	0.006274	0.352900	0.200700	0.000000	0.935	0.931	
V580B0	0.002124	0.004652	0.456500	0.198800	0.000000	0.939	0.983	
V26WWCH	0.002007	0.005550	0.361500	0.180300	0.000000	0.943	1.000	
V77RRP	0.001900	0.005290	0.359200	0.174100	0.000000	0.947	0.218	
V76GBB	0.001874	0.004111	0.455800	0.166700	0.000000	0.951	0.546	
V18YTH	0.001726	0.004872	0.354300	0.171800	0.000000	0.954	1.000	
V86BC00	0.001595	0.004421	0.360800	0.142300	0.000000	0.958	0.565	
V67GGC	0.001558	0.004376	0.356000	0.135400	0.000000	0.961	0.771	
V64BELL	0.001553	0.006272	0.247500	0.127500	0.000000	0.964	0.390	
V62RBTR	0.001522	0.004260	0.357300	0.127400	0.000000	0.967	0.609	
V57PINK	0.001480	0.004113	0.359800	0.127300	0.000000	0.970	0.362	
V92NFB	0.001412	0.003904	0.361800	0.141400	0.000000	0.973	0.583	
V97PCL	0.001237	0.004997	0.247500	0.102200	0.000000	0.976	0.108	
V40BRTH	0.001151	0.004652	0.247400	0.088800	0.000000	0.978	0.991	
V78LLOR	0.001038	0.004191	0.247800	0.106900	0.000000	0.980	0.129	
V60LFB	0.000929	0.003754	0.247500	0.076800	0.000000	0.982	0.925	
V84YRTH	0.000851	0.003434	0.247700	0.082700	0.000000	0.984	0.618	
V89PC00	0.000836	0.003378	0.247500	0.069100	0.000000	0.985	0.108	
V54STHR	0.000766	0.003093	0.247700	0.073200	0.000000	0.987	0.834	
V66CBW	0.000735	0.002968	0.247500	0.058800	0.000000	0.989	0.870	
V79YTHE	0.000733	0.002957	0.247800	0.075400	0.000000	0.990	0.636	
V96DF	0.000688	0.002777	0.247800	0.070800	0.000000	0.991	0.755	
V82AZKF	0.000680	0.002747	0.247500	0.053800	0.000000	0.993	0.111	
V100WBWS	0.000643	0.002594	0.247800	0.066200	0.000000	0.994	0.129	
V93DB	0.000634	0.002557	0.247700	0.061600	0.000000	0.995	0.903	

V102KING	0.000608	0.002454	0.247600	0.053800	0.000000	0.997	0.413
V90WTG	0.000572	0.002311	0.247700	0.055600	0.000000	0.998	0.953
V71PDOV	0.000540	0.002181	0.247800	0.055600	0.000000	0.999	0.767
V94RBEE	0.000523	0.002110	0.247800	0.053800	0.000000	1.000	0.972
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V61SPW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V88WG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V95HBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Mixed\_Montane Fore

	average	sd	ratio	ava	avb	cumsum	p
V13RWB	0.009338	0.006981	1.337700	1.080500	0.662400	0.025	0.508
V43GCU	0.009042	0.005499	1.644400	0.423100	1.256100	0.049	0.010 **
V83SFC	0.008981	0.004949	1.814500	0.424600	1.220000	0.073	0.014 *
V20PCU	0.008970	0.005919	1.515400	0.411800	1.268100	0.097	0.012 *
V67GGC	0.008783	0.005683	1.545500	0.135400	0.926600	0.121	0.004 **
V16LR	0.008555	0.006520	1.312100	0.852900	1.023200	0.144	0.324
V46BHHE	0.008352	0.007086	1.178600	0.491200	0.828800	0.166	0.540
V33RWH	0.008286	0.006874	1.205500	1.318700	0.753700	0.188	0.215
V37WHIP	0.008217	0.006567	1.251200	0.441900	1.020400	0.211	0.031 *
V23RBFT	0.008056	0.006201	1.299200	0.990600	0.883700	0.232	0.736
V36YFHE	0.008026	0.007167	1.120000	1.121400	1.134500	0.254	0.873
V28VS	0.007929	0.007261	1.091900	0.599300	0.709200	0.275	0.625
V19ER	0.007909	0.006742	1.173100	0.816000	0.266900	0.296	0.368
V48YTBC	0.007759	0.006195	1.252500	0.511500	0.958400	0.317	0.046 *
V54STHR	0.007620	0.004661	1.634900	0.073200	0.758900	0.337	0.002 **
V68PIL	0.007514	0.004974	1.510900	0.232900	0.785200	0.358	0.007 **
V35STP	0.007322	0.006426	1.139400	0.700100	0.944200	0.377	0.776
V27NHHE	0.007298	0.008654	0.843300	0.689200	0.000000	0.397	0.686
V49LYRE	0.007170	0.005092	1.408100	0.268000	0.803100	0.416	0.008 **
V50CHE	0.006930	0.005950	1.164700	0.580200	0.509600	0.435	0.286
V80RF	0.006902	0.006031	1.144500	0.568000	0.913500	0.453	0.186
V42SIL	0.006868	0.005994	1.145900	0.952800	1.363600	0.472	0.974
V14AUR	0.006236	0.005868	1.062700	0.893600	0.919800	0.488	0.423
V55LHE	0.006136	0.005947	1.031900	0.354900	0.590500	0.505	0.114
V29CST	0.006120	0.006185	0.989500	0.548200	0.314400	0.521	0.884
V24BFCS	0.006092	0.005192	1.173200	0.751600	0.496700	0.537	0.254
V26WWCH	0.006052	0.009091	0.665800	0.180300	0.462400	0.554	0.965
V17WPHE	0.005965	0.009471	0.629800	0.602000	0.000000	0.570	0.986
V81SHBC	0.005961	0.005479	1.088100	0.641600	1.191300	0.586	0.856
V8WNHE	0.005525	0.005093	1.084800	1.588600	1.709100	0.601	0.786
V21ESP	0.005370	0.004726	1.136100	1.236300	1.502100	0.615	0.997
V15STTH	0.005290	0.006652	0.795300	1.475400	1.857500	0.629	0.948
V86BC00	0.005217	0.005078	1.027400	0.142300	0.481700	0.643	0.053 .
V11CR	0.004834	0.005601	0.863000	1.443400	1.710400	0.656	0.999
V41SPP	0.004678	0.005784	0.808700	1.058800	1.352200	0.669	0.867
V22SCR	0.004598	0.006404	0.718100	0.210400	0.317500	0.681	0.924
V85ROSE	0.004568	0.005803	0.787200	0.239700	0.331700	0.693	0.095 .
V9SFW	0.004450	0.004930	0.902600	1.384400	1.525000	0.705	0.796
V32SCC	0.004345	0.009627	0.451300	0.441300	0.000000	0.717	0.857
V4BTH	0.004124	0.005531	0.745600	1.946400	2.294000	0.728	0.998
V56FTC	0.004054	0.005016	0.808300	0.948600	1.231300	0.739	0.994
V6WTTR	0.003848	0.005024	0.765900	1.325800	1.567100	0.749	0.973
V62RBTR	0.003800	0.005744	0.661600	0.127400	0.281200	0.759	0.141
V7WEHE	0.003646	0.003640	1.001600	1.252500	1.224500	0.769	0.990
V31AMAG	0.003590	0.006655	0.539500	0.370900	0.000000	0.779	0.836

V510WH	0.003548	0.004941	0.718000	0.211500	0.220000	0.788	0.237
V56WH	0.003405	0.004259	0.799600	1.325200	1.486100	0.797	0.961
V2EYR	0.003300	0.004546	0.725800	1.285300	1.440100	0.806	0.986
V69SKF	0.003277	0.005158	0.635200	0.334500	0.000000	0.815	0.969
V57PINK	0.003208	0.004800	0.668200	0.127300	0.250000	0.824	0.145
V76GBB	0.003203	0.004482	0.714700	0.166700	0.220000	0.832	0.173
V63DWS	0.003119	0.004987	0.625500	0.313100	0.000000	0.840	0.836
V10WBSW	0.002993	0.004868	0.614800	1.426000	1.622600	0.849	1.000
V36F	0.002942	0.004175	0.704800	1.569300	1.724600	0.856	0.987
V65LWB	0.002877	0.008006	0.359400	0.258700	0.000000	0.864	0.613
V102KING	0.002549	0.004128	0.617500	0.053800	0.236400	0.871	0.113
V39FHE	0.002424	0.006810	0.356000	0.248500	0.000000	0.877	0.862
V34WSW	0.002385	0.005233	0.455700	0.247500	0.000000	0.884	0.994
V53MB	0.002366	0.005345	0.442500	0.224200	0.000000	0.890	0.904
V44MUSK	0.002278	0.006306	0.361200	0.236300	0.000000	0.896	0.779
V98FLAME	0.002256	0.004937	0.457000	0.220500	0.000000	0.902	0.806
V87LFC	0.002212	0.004906	0.450900	0.224900	0.000000	0.908	0.687
V52TRM	0.001993	0.005682	0.350700	0.202800	0.000000	0.914	0.792
V47RFC	0.001992	0.004375	0.455300	0.214300	0.000000	0.919	0.926
V30BTR	0.001964	0.005551	0.353800	0.200700	0.000000	0.924	0.931
V25WAG	0.001953	0.004286	0.455700	0.205100	0.000000	0.929	0.997
V580B0	0.001891	0.004139	0.456800	0.198800	0.000000	0.934	0.990
V16ST	0.001754	0.001220	1.437400	1.466600	1.379200	0.939	0.861
V38GAL	0.001728	0.004792	0.360600	0.178700	0.000000	0.944	0.969
V77RRP	0.001687	0.004691	0.359700	0.174100	0.000000	0.948	0.386
V18YTH	0.001548	0.004368	0.354500	0.171800	0.000000	0.953	0.999
V45MGLK	0.001409	0.003896	0.361600	0.142600	0.000000	0.956	0.975
V64BELL	0.001363	0.005506	0.247500	0.127500	0.000000	0.960	0.558
V92NFB	0.001268	0.003504	0.361700	0.141400	0.000000	0.963	0.790
V12LK	0.001220	0.000891	1.368900	1.372500	1.324100	0.967	0.997
V97PCL	0.001087	0.004390	0.247500	0.102200	0.000000	0.970	0.485
V70RSL	0.001006	0.004066	0.247500	0.094600	0.000000	0.972	0.990
V40BRTH	0.001003	0.004051	0.247500	0.088800	0.000000	0.975	0.997
V91NMIN	0.000978	0.002735	0.357500	0.103300	0.000000	0.978	0.971
V78LLOR	0.000935	0.003773	0.247700	0.106900	0.000000	0.980	0.519
V60LFB	0.000816	0.003298	0.247500	0.076800	0.000000	0.982	0.960
V84YRTH	0.000761	0.003073	0.247700	0.082700	0.000000	0.984	0.792
V89PC00	0.000734	0.002967	0.247500	0.069100	0.000000	0.986	0.485
V79YTHE	0.000659	0.002662	0.247700	0.075400	0.000000	0.988	0.809
V66CBW	0.000643	0.002597	0.247500	0.058800	0.000000	0.990	0.918
V96DF	0.000619	0.002499	0.247700	0.070800	0.000000	0.991	0.823
V82AZKF	0.000594	0.002400	0.247500	0.053800	0.000000	0.993	0.505
V100WBWS	0.000579	0.002335	0.247700	0.066200	0.000000	0.995	0.519
V93DB	0.000567	0.002289	0.247700	0.061600	0.000000	0.996	0.970
V90WTG	0.000512	0.002068	0.247700	0.055600	0.000000	0.997	0.978
V71PDOV	0.000486	0.001964	0.247700	0.055600	0.000000	0.999	0.909
V94RBEE	0.000470	0.001899	0.247700	0.053800	0.000000	1.000	0.985
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V61SPW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V88WG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V95HBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Mixed\_Foothills Wo

	average	sd	ratio	ava	avb	cumsum	p
V40BRTH	0.014392	0.009230	1.559200	0.088800	1.423800	0.037	0.006 **
V22SCR	0.012437	0.004863	2.557800	0.210400	1.364500	0.068	0.001 ***



V26WWCH	0.011907	0.007887	1.509700	0.180300	1.210300	0.099	0.013	*
V18YTH	0.011886	0.007877	1.508900	0.171800	1.199300	0.129	0.036	*
V10WBSW	0.009520	0.007570	1.257700	1.426000	0.773600	0.154	0.253	
V23RBFT	0.009458	0.007442	1.270900	0.990600	0.243500	0.178	0.178	
V28VS	0.009159	0.007107	1.288800	0.599300	1.088900	0.201	0.144	
V53MB	0.008400	0.005483	1.532100	0.224200	0.851600	0.222	0.015	*
V46BHHE	0.008159	0.006034	1.352200	0.491200	0.931700	0.243	0.631	
V16LR	0.008067	0.006758	1.193700	0.852900	1.479800	0.264	0.512	
V19ER	0.007778	0.006808	1.142400	0.816000	0.654600	0.284	0.431	
V69SKF	0.007708	0.006107	1.262200	0.334500	0.890600	0.304	0.054	.
V35STP	0.007702	0.006775	1.136900	0.700100	1.011200	0.323	0.634	
V42SIL	0.007673	0.005328	1.440100	0.952800	0.761200	0.343	0.805	
V27NHHE	0.007657	0.007842	0.976500	0.689200	0.256000	0.362	0.631	
V50CHE	0.007225	0.007685	0.940200	0.580200	0.384600	0.381	0.206	
V36YFHE	0.007150	0.005676	1.259600	1.121400	1.319700	0.399	0.979	
V29CST	0.007090	0.006413	1.105700	0.548200	0.659900	0.417	0.281	
V20PCU	0.007080	0.006583	1.075500	0.411800	0.673000	0.435	0.211	
V9SFW	0.007048	0.006634	1.062400	1.384400	1.081900	0.453	0.222	
V14AUR	0.006603	0.006170	1.070200	0.893600	0.987000	0.470	0.313	
V43GCU	0.006573	0.006112	1.075300	0.423100	0.583000	0.487	0.467	
V80RF	0.006348	0.006410	0.990200	0.568000	0.304500	0.503	0.351	
V13RWB	0.006090	0.004647	1.310500	1.080500	1.170600	0.519	0.999	
V17WPHE	0.006088	0.009642	0.631400	0.602000	0.000000	0.534	0.987	
V64BELL	0.005858	0.009467	0.618800	0.127500	0.492000	0.549	0.144	
V81SHBC	0.005798	0.005361	1.081400	0.641600	0.807100	0.564	0.929	
V15STTH	0.005476	0.006465	0.847000	1.475400	1.788200	0.578	0.957	
V83SFC	0.005382	0.006098	0.882700	0.424600	0.261700	0.592	0.563	
V24BFCS	0.005280	0.004956	1.065500	0.751600	0.794400	0.605	0.471	
V41SPP	0.005277	0.006727	0.784500	1.058800	1.526000	0.619	0.796	
V48YBTC	0.005274	0.006448	0.817800	0.511500	0.000000	0.632	0.488	
V8WNHE	0.005251	0.004942	1.062400	1.588600	1.582200	0.645	0.812	
V11CR	0.004856	0.004784	1.015100	1.443400	1.484400	0.658	0.999	
V21ESP	0.004753	0.004815	0.987100	1.236300	1.346100	0.670	1.000	
V37WHIP	0.004623	0.006367	0.726100	0.441900	0.000000	0.682	0.661	
V32SCC	0.004434	0.009801	0.452400	0.441300	0.000000	0.693	0.852	
V63DWS	0.004331	0.005235	0.827300	0.313100	0.243500	0.704	0.596	
V7WEHE	0.004274	0.004093	1.044200	1.252500	1.318200	0.715	0.960	
V56FTC	0.004240	0.005159	0.821900	0.948600	1.244700	0.726	0.990	
V33RWH	0.004130	0.005045	0.818600	1.318700	1.597500	0.736	0.991	
V4BTH	0.004096	0.004957	0.826300	1.946400	1.975000	0.747	0.997	
V96DF	0.003970	0.006435	0.617000	0.070800	0.349000	0.757	0.083	.
V580B0	0.003798	0.005307	0.715600	0.198800	0.261700	0.767	0.832	
V6WTR	0.003785	0.005196	0.728400	1.325800	1.579900	0.776	0.983	
V2EYR	0.003733	0.004281	0.872000	1.285300	1.316800	0.786	0.971	
V31AMAG	0.003663	0.006775	0.540700	0.370900	0.000000	0.795	0.824	
V55LHE	0.003636	0.005729	0.634700	0.354900	0.000000	0.804	0.551	
V56WH	0.003634	0.003729	0.974400	1.325200	1.309900	0.814	0.930	
V61SPW	0.003414	0.005979	0.571000	0.000000	0.326200	0.823	0.219	
V36F	0.003253	0.003748	0.868100	1.569300	1.569600	0.831	0.979	
V62RBTR	0.003142	0.004683	0.670900	0.127400	0.220000	0.839	0.289	
V65LWB	0.002942	0.008165	0.360300	0.258700	0.000000	0.846	0.611	
V49LYRE	0.002899	0.005317	0.545200	0.268000	0.000000	0.854	0.701	
V66CBW	0.002697	0.004351	0.619700	0.058800	0.220000	0.861	0.395	
V85ROSE	0.002535	0.004640	0.546400	0.239700	0.000000	0.867	0.502	
V39FHE	0.002474	0.006936	0.356600	0.248500	0.000000	0.874	0.883	
V34WSW	0.002433	0.005328	0.456700	0.247500	0.000000	0.880	0.993	
V16ST	0.002432	0.002103	1.156600	1.466600	1.577800	0.886	0.244	
V68PIL	0.002421	0.005305	0.456500	0.232900	0.000000	0.892	0.689	
V44MUSK	0.002324	0.006421	0.361900	0.236300	0.000000	0.898	0.800	
V98FLAME	0.002304	0.005029	0.458100	0.220500	0.000000	0.904	0.801	
V87LFC	0.002258	0.004995	0.452000	0.224900	0.000000	0.910	0.668	
V51OWH	0.002175	0.004792	0.453900	0.211500	0.000000	0.915	0.413	
V52TRM	0.002033	0.005787	0.351300	0.202800	0.000000	0.920	0.789	
V47RFC	0.002030	0.004451	0.456200	0.214300	0.000000	0.926	0.916	
V30BTR	0.002004	0.005654	0.354500	0.200700	0.000000	0.931	0.941	

V25WAG	0.001992	0.004362	0.456700	0.205100	0.000000	0.936	0.997
V38GAL	0.001763	0.004879	0.361300	0.178700	0.000000	0.940	0.969
V77RRP	0.001722	0.004777	0.360400	0.174100	0.000000	0.945	0.385
V76GBB	0.001693	0.003703	0.457300	0.166700	0.000000	0.949	0.674
V86BC00	0.001443	0.003991	0.361600	0.142300	0.000000	0.953	0.610
V45MGLK	0.001438	0.003967	0.362300	0.142600	0.000000	0.956	0.970
V12LK	0.001432	0.001053	1.360800	1.372500	1.350100	0.960	0.979
V67GGC	0.001406	0.003942	0.356500	0.135400	0.000000	0.964	0.870
V57PINK	0.001334	0.003700	0.360500	0.127300	0.000000	0.967	0.455
V92NFB	0.001291	0.003564	0.362400	0.141400	0.000000	0.970	0.762
V97PCL	0.001110	0.004475	0.248100	0.102200	0.000000	0.973	0.429
V70RSL	0.001028	0.004145	0.248100	0.094600	0.000000	0.976	0.989
V91NMIN	0.000997	0.002784	0.358300	0.103300	0.000000	0.978	0.976
V78LLOR	0.000952	0.003836	0.248100	0.106900	0.000000	0.981	0.456
V60LFB	0.000834	0.003362	0.248100	0.076800	0.000000	0.983	0.961
V84YRTH	0.000776	0.003127	0.248100	0.082700	0.000000	0.985	0.763
V89PC00	0.000750	0.003025	0.248100	0.069100	0.000000	0.987	0.428
V54STHR	0.000698	0.002812	0.248100	0.073200	0.000000	0.989	0.855
V79YTHE	0.000672	0.002706	0.248100	0.075400	0.000000	0.990	0.763
V82AZKF	0.000607	0.002448	0.248100	0.053800	0.000000	0.992	0.414
V100WBWS	0.000589	0.002375	0.248100	0.066200	0.000000	0.993	0.456
V93DB	0.000578	0.002329	0.248100	0.061600	0.000000	0.995	0.961
V102KING	0.000549	0.002214	0.248100	0.053800	0.000000	0.996	0.537
V90WTG	0.000522	0.002104	0.248100	0.055600	0.000000	0.998	0.980
V71PD0V	0.000495	0.001997	0.248100	0.055600	0.000000	0.999	0.898
V94RBEE	0.000479	0.001931	0.248100	0.053800	0.000000	1.000	0.989
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V88WG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V95HBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Mixed\_Box-Ironbark

	average	sd	ratio	ava	avb	cumsum	p
V18YTH	0.018658	0.005852	3.188000	0.171800	1.909900	0.039	0.001 ***
V26WWCH	0.015902	0.005536	2.872000	0.180300	1.655500	0.072	0.001 ***
V10WBSW	0.015288	0.006045	2.529000	1.426000	0.000000	0.103	0.002 **
V39FHE	0.014967	0.004566	3.278000	0.248500	1.532700	0.134	0.001 ***
V46BHHE	0.014098	0.007088	1.989000	0.491200	1.798900	0.163	0.002 **
V40BRTH	0.013699	0.008353	1.640000	0.088800	1.379300	0.192	0.010 **
V21ESP	0.013293	0.006583	2.019000	1.236300	0.000000	0.219	0.001 ***
V22SCR	0.012484	0.005255	2.376000	0.210400	1.350800	0.245	0.002 **
V44MUSK	0.011843	0.007846	1.509000	0.236300	1.180800	0.269	0.001 ***
V75RCR	0.010748	0.003075	3.495000	0.000000	1.000900	0.292	0.001 ***
V580B0	0.009787	0.004514	2.168000	0.198800	1.059200	0.312	0.002 **
V23RBFT	0.009490	0.007770	1.221000	0.990600	0.320500	0.332	0.164
V13RWB	0.008878	0.006402	1.387000	1.080500	1.792200	0.350	0.669
V56FTC	0.008670	0.006269	1.383000	0.948600	0.281200	0.368	0.028 *
V28VS	0.008644	0.006295	1.373000	0.599300	0.971800	0.386	0.304
V11CR	0.008437	0.007081	1.192000	1.443400	0.992900	0.403	0.757
V36YFHE	0.008272	0.006141	1.347000	1.121400	1.383500	0.420	0.827
V16LR	0.008079	0.006977	1.158000	0.852900	0.576500	0.437	0.530
V35STP	0.007717	0.006654	1.160000	0.700100	0.656700	0.453	0.662
V27NHHE	0.007497	0.008904	0.842000	0.689200	0.000000	0.468	0.640
V19ER	0.007343	0.005945	1.235000	0.816000	0.846400	0.484	0.660
V43GCU	0.007068	0.005570	1.269000	0.423100	0.818400	0.498	0.279
V42SIL	0.006994	0.005548	1.261000	0.952800	1.255000	0.513	0.945
V4BTH	0.006788	0.003994	1.699000	1.946400	1.520900	0.527	0.833

V2EYR	0.006709	0.005999	1.118000	1.285300	0.874900	0.541	0.412
V81SHBC	0.006489	0.005846	1.110000	0.641600	0.281200	0.554	0.426
V66CBW	0.006361	0.006379	0.997000	0.058800	0.566600	0.567	0.012 *
V70RSL	0.006278	0.006199	1.013000	0.094600	0.557400	0.580	0.164
V17WPHE	0.006117	0.009722	0.629000	0.602000	0.000000	0.593	0.989
V80RF	0.006050	0.006578	0.920000	0.568000	0.000000	0.605	0.480
V90WTG	0.006046	0.006464	0.935000	0.055600	0.542000	0.618	0.041 *
V50CHE	0.006025	0.007514	0.802000	0.580200	0.000000	0.630	0.480
V29CST	0.005983	0.006099	0.981000	0.548200	0.256000	0.643	0.931
V61SPW	0.005859	0.005982	0.980000	0.000000	0.593000	0.655	0.025 *
V14AUR	0.005388	0.005537	0.973000	0.893600	1.211600	0.666	0.682
V48YTBC	0.005300	0.006506	0.815000	0.511500	0.000000	0.677	0.559
V15STTH	0.005211	0.006022	0.865000	1.475400	1.627000	0.688	0.966
V9SFW	0.005137	0.005014	1.024000	1.384400	1.472800	0.698	0.620
V41SPP	0.004977	0.006330	0.786000	1.058800	1.440100	0.709	0.841
V30BTR	0.004843	0.007338	0.660000	0.200700	0.382900	0.719	0.573
V56WH	0.004733	0.003669	1.290000	1.325200	1.171900	0.729	0.717
V36F	0.004725	0.003539	1.335000	1.569300	1.330200	0.738	0.722
V8WNHE	0.004707	0.005030	0.936000	1.588600	1.595400	0.748	0.911
V37WHIP	0.004647	0.006424	0.723000	0.441900	0.000000	0.758	0.671
V83SFC	0.004543	0.006404	0.710000	0.424600	0.000000	0.767	0.785
V24BFCS	0.004457	0.004309	1.034000	0.751600	1.014400	0.776	0.806
V32SCC	0.004454	0.009873	0.451000	0.441300	0.000000	0.785	0.831
V20PCU	0.004351	0.005983	0.727000	0.411800	0.000000	0.794	0.977
V79YTHE	0.004127	0.006650	0.621000	0.075400	0.396100	0.803	0.032 *
V63DWS	0.004112	0.005037	0.816000	0.313100	0.220000	0.811	0.629
V7WEHE	0.004030	0.003983	1.012000	1.252500	1.296700	0.820	0.978
V33RWH	0.003758	0.004830	0.778000	1.318700	1.512200	0.828	0.998
V6WTR	0.003705	0.004996	0.741000	1.325800	1.525100	0.835	0.984
V31AMAG	0.003680	0.006826	0.539000	0.370900	0.000000	0.843	0.803
V55LHE	0.003654	0.005776	0.633000	0.354900	0.000000	0.850	0.591
V69SKF	0.003359	0.005292	0.635000	0.334500	0.000000	0.857	0.964
V76GBB	0.003230	0.004486	0.720000	0.166700	0.210200	0.864	0.170
V65LWB	0.002960	0.008240	0.359000	0.258700	0.000000	0.870	0.592
V49LYRE	0.002915	0.005365	0.543000	0.268000	0.000000	0.876	0.686
V96DF	0.002818	0.004531	0.622000	0.070800	0.256000	0.882	0.228
V12LK	0.002704	0.001574	1.718000	1.372500	1.122800	0.888	0.610
V94RBEE	0.002692	0.004346	0.620000	0.053800	0.256000	0.893	0.405
V85ROSE	0.002548	0.004679	0.545000	0.239700	0.000000	0.898	0.546
V34WSW	0.002444	0.005368	0.455000	0.247500	0.000000	0.903	0.997
V68PTL	0.002434	0.005347	0.455000	0.232900	0.000000	0.908	0.689
V53MB	0.002430	0.005496	0.442000	0.224200	0.000000	0.914	0.902
V16ST	0.002363	0.001590	1.487000	1.466600	1.425700	0.918	0.293
V98FLAME	0.002315	0.005070	0.457000	0.220500	0.000000	0.923	0.789
V87LFC	0.002268	0.005033	0.451000	0.224900	0.000000	0.928	0.623
V510WH	0.002186	0.004829	0.453000	0.211500	0.000000	0.932	0.457
V88WG	0.002185	0.003827	0.571000	0.000000	0.210200	0.937	0.277
V95HBC	0.002185	0.003827	0.571000	0.000000	0.210200	0.942	0.136
V52TRM	0.002043	0.005832	0.350000	0.202800	0.000000	0.946	0.772
V47RFC	0.002039	0.004481	0.455000	0.214300	0.000000	0.950	0.905
V25WAG	0.002001	0.004394	0.455000	0.205100	0.000000	0.954	0.999
V38GAL	0.001771	0.004914	0.360000	0.178700	0.000000	0.958	0.979
V77RRP	0.001730	0.004812	0.359000	0.174100	0.000000	0.961	0.342
V86BC00	0.001450	0.004021	0.361000	0.142300	0.000000	0.964	0.588
V45MGLK	0.001444	0.003997	0.361000	0.142600	0.000000	0.967	0.977
V67GGC	0.001413	0.003972	0.356000	0.135400	0.000000	0.970	0.841
V64BELL	0.001400	0.005660	0.247000	0.127500	0.000000	0.973	0.536
V62RBTR	0.001374	0.003843	0.358000	0.127400	0.000000	0.976	0.661
V57PINK	0.001341	0.003729	0.359000	0.127300	0.000000	0.979	0.479
V92NFB	0.001296	0.003585	0.362000	0.141400	0.000000	0.981	0.743
V97PCL	0.001116	0.004512	0.247000	0.102200	0.000000	0.984	0.402
V91NMN	0.001002	0.002802	0.357000	0.103300	0.000000	0.986	0.973
V78LLOR	0.000955	0.003858	0.248000	0.106900	0.000000	0.988	0.412
V60LFB	0.000839	0.003390	0.247000	0.076800	0.000000	0.990	0.963
V84YRTH	0.000779	0.003146	0.248000	0.082700	0.000000	0.991	0.755

V89PC00	0.000755	0.003050	0.247000	0.069100	0.000000	0.993	0.402
V54STHR	0.000701	0.002830	0.248000	0.073200	0.000000	0.994	0.864
V82AZKF	0.000611	0.002470	0.247000	0.053800	0.000000	0.995	0.410
V100WBWS	0.000591	0.002388	0.248000	0.066200	0.000000	0.997	0.412
V93DB	0.000580	0.002343	0.248000	0.061600	0.000000	0.998	0.960
V102KING	0.000552	0.002230	0.247000	0.053800	0.000000	0.999	0.569
V71PDOV	0.000497	0.002008	0.248000	0.055600	0.000000	1.000	0.881
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Mixed\_River Red Gu

	average	sd	ratio	ava	avb	cumsum	p	
V4BTH	0.020445	0.006218	3.288000	1.946400	0.000000	0.030	0.001	***
V32SCC	0.020280	0.007521	2.697000	0.441300	2.225000	0.060	0.001	***
V17WPHE	0.015917	0.009167	1.736000	0.602000	2.034900	0.084	0.018	*
V10WBSW	0.015087	0.005860	2.574000	1.426000	0.000000	0.106	0.001	***
V11CR	0.015054	0.006597	2.282000	1.443400	0.000000	0.128	0.001	***
V38GAL	0.014937	0.005417	2.758000	0.178700	1.582800	0.151	0.001	***
V26WWCH	0.014881	0.004857	3.064000	0.180300	1.578000	0.173	0.002	**
V8WNHE	0.014481	0.007804	1.856000	1.588600	0.289600	0.194	0.004	**
V30BTR	0.014462	0.004730	3.057000	0.200700	1.520300	0.216	0.001	***
V2EYR	0.013450	0.005370	2.505000	1.285300	0.000000	0.236	0.001	***
V7WEHE	0.013287	0.005547	2.395000	1.252500	0.000000	0.255	0.001	***
V60LFB	0.013139	0.004117	3.192000	0.076800	1.312300	0.275	0.001	***
V21ESP	0.013118	0.006422	2.043000	1.236300	0.000000	0.294	0.001	***
V25WAG	0.012318	0.004959	2.484000	0.205100	1.365200	0.312	0.001	***
V31AMAG	0.011976	0.005536	2.163000	0.370900	1.393900	0.330	0.001	***
V45MGLK	0.011411	0.003990	2.860000	0.142600	1.216900	0.347	0.001	***
V36YFHE	0.011370	0.007879	1.443000	1.121400	0.000000	0.364	0.043	*
V13RWB	0.011326	0.007442	1.522000	1.080500	0.000000	0.381	0.059	.
V47RFC	0.011238	0.004799	2.342000	0.214300	1.251400	0.397	0.001	***
V70RSL	0.011018	0.007241	1.522000	0.094600	1.085200	0.414	0.003	**
V41SPP	0.010892	0.006237	1.746000	1.058800	0.000000	0.430	0.004	**
V15STTH	0.010499	0.008202	1.280000	1.475400	0.745400	0.445	0.120	
V35STP	0.010090	0.007467	1.351000	0.700100	1.638300	0.460	0.030	*
V73JW	0.009687	0.005914	1.638000	0.000000	0.934100	0.474	0.001	***
V33RWH	0.009674	0.006163	1.570000	1.318700	0.532700	0.489	0.030	*
V42SIL	0.009667	0.007712	1.253000	0.952800	0.442300	0.503	0.112	
V34WSW	0.009358	0.006570	1.424000	0.247500	0.961700	0.517	0.117	
V52TRM	0.009124	0.005824	1.567000	0.202800	0.871300	0.531	0.009	**
V98FLAME	0.009079	0.006396	1.419000	0.220500	0.964700	0.544	0.008	**
V69SKF	0.008992	0.005367	1.675000	0.334500	1.156400	0.557	0.006	**
V18YTH	0.008930	0.008900	1.003000	0.171800	0.845000	0.571	0.286	
V23RBFT	0.008751	0.006449	1.357000	0.990600	0.456500	0.584	0.373	
V6WTTT	0.008747	0.007272	1.203000	1.325800	0.736100	0.597	0.172	
V56FTC	0.008722	0.005609	1.555000	0.948600	0.220000	0.609	0.023	*
V93DB	0.008385	0.005276	1.589000	0.061600	0.829800	0.622	0.001	***
V91NMIN	0.008172	0.007902	1.034000	0.103300	0.767400	0.634	0.026	*
V28VS	0.007982	0.007161	1.115000	0.599300	0.686000	0.646	0.624	
V56GWH	0.007767	0.005012	1.550000	1.325200	0.765000	0.657	0.077	.
V94RBEE	0.007444	0.004665	1.596000	0.053800	0.732200	0.668	0.001	***
V27NHHE	0.007397	0.008745	0.846000	0.689200	0.000000	0.679	0.676	
V19ER	0.007375	0.006436	1.146000	0.816000	1.397300	0.690	0.647	
V16LR	0.006856	0.005658	1.212000	0.852900	1.252000	0.700	0.880	
V59YR	0.006854	0.006952	0.986000	0.000000	0.651800	0.711	0.011	*
V81SHBC	0.006705	0.005721	1.172000	0.641600	0.000000	0.720	0.293	
V36F	0.006585	0.003090	2.131000	1.569300	1.077300	0.730	0.278	
V29CST	0.006553	0.005132	1.277000	0.548200	0.776000	0.740	0.652	

V20PCU	0.006505	0.006055	1.074000	0.411800	0.602800	0.750	0.551
V88WG	0.006448	0.006586	0.979000	0.000000	0.612900	0.759	0.011 *
V90WTG	0.006446	0.006479	0.995000	0.055600	0.612900	0.769	0.028 *
V99WWT	0.006439	0.006551	0.983000	0.000000	0.615300	0.778	0.008 **
V580B0	0.006407	0.006318	1.014000	0.198800	0.611700	0.788	0.105
V24BFCS	0.006242	0.005422	1.151000	0.751600	1.328700	0.797	0.209
V9SFW	0.006159	0.003969	1.552000	1.384400	1.145500	0.806	0.352
V80RF	0.005971	0.006465	0.924000	0.568000	0.000000	0.815	0.501
V50CHE	0.005950	0.007394	0.805000	0.580200	0.000000	0.824	0.531
V92NFB	0.005676	0.005583	1.017000	0.141400	0.513100	0.832	0.019 *
V72CRP	0.005564	0.005644	0.986000	0.000000	0.545600	0.840	0.004 **
V71PD0V	0.005528	0.005717	0.967000	0.055600	0.530500	0.849	0.015 *
V48YTBC	0.005233	0.006402	0.817000	0.511500	0.000000	0.856	0.569
V14AUR	0.005141	0.005536	0.929000	0.893600	1.237700	0.864	0.753
V12LK	0.005031	0.005700	0.883000	1.372500	0.910300	0.871	0.120
V46BHHE	0.004971	0.006225	0.799000	0.491200	0.000000	0.879	0.997
V37WHIP	0.004588	0.006321	0.726000	0.441900	0.000000	0.885	0.672
V84YRTH	0.004512	0.007311	0.617000	0.082700	0.389600	0.892	0.027 *
V83SFC	0.004484	0.006299	0.712000	0.424600	0.000000	0.899	0.817
V43GCU	0.004425	0.006145	0.720000	0.423100	0.000000	0.905	0.986
V87LFC	0.004386	0.006114	0.717000	0.224900	0.314400	0.912	0.203
V53MB	0.003834	0.005402	0.710000	0.224200	0.210200	0.917	0.660
V101LCOR	0.003699	0.006477	0.571000	0.000000	0.370000	0.923	0.064 .
V55LHE	0.003608	0.005688	0.634000	0.354900	0.000000	0.928	0.624
V63DWS	0.003160	0.005040	0.627000	0.313100	0.000000	0.933	0.833
V65LWB	0.002918	0.008100	0.360000	0.258700	0.000000	0.937	0.603
V49LYRE	0.002876	0.005277	0.545000	0.268000	0.000000	0.942	0.704
V74BCHE	0.002855	0.005003	0.571000	0.000000	0.261700	0.946	0.052 .
V85ROSE	0.002515	0.004606	0.546000	0.239700	0.000000	0.950	0.536
V39FHE	0.002455	0.006886	0.357000	0.248500	0.000000	0.953	0.865
V68PIL	0.002403	0.005266	0.456000	0.232900	0.000000	0.957	0.716
V44MUSK	0.002307	0.006375	0.362000	0.236300	0.000000	0.960	0.769
V95HBC	0.002170	0.003801	0.571000	0.000000	0.198800	0.963	0.168
V510WH	0.002158	0.004757	0.454000	0.211500	0.000000	0.967	0.458
V22SCR	0.002084	0.004592	0.454000	0.210400	0.000000	0.970	0.999
V16ST	0.002006	0.001368	1.466000	1.466600	1.343300	0.973	0.623
V77RRP	0.001709	0.004743	0.360000	0.174100	0.000000	0.975	0.346
V76GBB	0.001680	0.003676	0.457000	0.166700	0.000000	0.978	0.655
V86BC00	0.001432	0.003963	0.361000	0.142300	0.000000	0.980	0.625
V67GGC	0.001395	0.003914	0.356000	0.135400	0.000000	0.982	0.878
V64BELL	0.001382	0.005570	0.248000	0.127500	0.000000	0.984	0.570
V62RBTR	0.001356	0.003781	0.359000	0.127400	0.000000	0.986	0.684
V57PINK	0.001324	0.003673	0.360000	0.127300	0.000000	0.988	0.492
V97PCL	0.001101	0.004441	0.248000	0.102200	0.000000	0.990	0.404
V40BRTH	0.001017	0.004100	0.248000	0.088800	0.000000	0.991	0.997
V78LLOR	0.000946	0.003812	0.248000	0.106900	0.000000	0.992	0.458
V89PC00	0.000744	0.003002	0.248000	0.069100	0.000000	0.994	0.404
V54STHR	0.000693	0.002793	0.248000	0.073200	0.000000	0.995	0.859
V79YTHE	0.000667	0.002689	0.248000	0.075400	0.000000	0.996	0.776
V66CBW	0.000652	0.002628	0.248000	0.058800	0.000000	0.997	0.930
V96DF	0.000626	0.002525	0.248000	0.070800	0.000000	0.997	0.810
V82AZKF	0.000602	0.002428	0.248000	0.053800	0.000000	0.998	0.433
V100WBWS	0.000585	0.002359	0.248000	0.066200	0.000000	0.999	0.458
V102KING	0.000545	0.002198	0.248000	0.053800	0.000000	1.000	0.626
V61SPW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Gippsland Ma\_Montane Fore

	average	sd	ratio	ava	avb	cumsum	p
V17WPHE	0.025511	0.002976	8.572000	2.247700	0.000000	0.047	0.001 ***
V34WSW	0.020923	0.002668	7.841000	1.856000	0.000000	0.086	0.002 **
V11CR	0.019365	0.002542	7.617000	0.000000	1.710400	0.121	0.002 **

V27NHHE	0.018629	0.005197	3.584000	1.646300	0.000000	0.156	0.001	***
V6WTRR	0.017764	0.002227	7.977000	0.000000	1.567100	0.189	0.001	***
V15STTH	0.017530	0.007233	2.423000	0.323400	1.857500	0.221	0.001	***
V25WAG	0.015594	0.002143	7.276000	1.376000	0.000000	0.250	0.001	***
V13RWB	0.014804	0.009495	1.559000	1.922100	0.662400	0.277	0.014	*
V20PCU	0.014406	0.001861	7.739000	0.000000	1.268100	0.304	0.001	***
V43GCU	0.014108	0.001624	8.689000	0.000000	1.256100	0.330	0.002	**
V83SFC	0.013763	0.001275	10.794000	0.000000	1.220000	0.355	0.001	***
V4BTH	0.012989	0.009916	1.310000	1.184200	2.294000	0.379	0.080	.
V42SIL	0.012586	0.005694	2.210000	0.420400	1.363600	0.402	0.035	*
V36F	0.012521	0.008426	1.486000	0.646500	1.724600	0.425	0.004	**
V19ER	0.011718	0.005658	2.071000	1.308600	0.266900	0.447	0.019	*
V37WHIP	0.011155	0.006729	1.658000	0.000000	1.020400	0.468	0.007	**
V48YTBC	0.010991	0.006611	1.663000	0.000000	0.958400	0.488	0.006	**
V81SHBC	0.010400	0.005715	1.834000	0.271900	1.191300	0.507	0.007	**
V21ESP	0.010274	0.006547	1.569000	0.644000	1.502100	0.526	0.139	.
V67GGC	0.010101	0.006264	1.613000	0.000000	0.926600	0.545	0.002	**
V80RF	0.010024	0.006191	1.619000	0.000000	0.913500	0.563	0.019	*
V56WH	0.009874	0.007909	1.248000	0.674800	1.486100	0.582	0.032	*
V29CST	0.009751	0.004639	2.102000	1.059100	0.314400	0.599	0.031	*
V36YFHE	0.009681	0.007030	1.377000	1.243700	1.134500	0.617	0.425	.
V16LR	0.009375	0.007159	1.310000	1.184900	1.023200	0.635	0.232	.
V46BHHHE	0.008981	0.008370	1.073000	0.307900	0.828800	0.651	0.375	.
V49LYRE	0.008738	0.005375	1.626000	0.000000	0.803100	0.667	0.012	*
V33RWH	0.008651	0.007180	1.205000	0.579800	0.753700	0.683	0.269	.
V68PIL	0.008604	0.005317	1.618000	0.000000	0.785200	0.699	0.011	*
V54STHR	0.008499	0.005150	1.650000	0.000000	0.758900	0.715	0.001	***
V65LWB	0.008071	0.008400	0.961000	0.741500	0.000000	0.730	0.151	.
V63DWS	0.007899	0.008217	0.961000	0.724800	0.000000	0.744	0.077	.
V91NMIN	0.007851	0.008209	0.956000	0.719700	0.000000	0.759	0.080	.
V28VS	0.007829	0.008154	0.960000	0.000000	0.709200	0.773	0.598	.
V7WEHE	0.007421	0.005457	1.360000	1.241500	1.224500	0.787	0.402	.
V24BFCS	0.007277	0.005961	1.221000	1.112500	0.496700	0.800	0.103	.
V56FTC	0.007098	0.006534	1.086000	0.615700	1.231300	0.813	0.411	.
V35STP	0.006718	0.007148	0.940000	0.993200	0.944200	0.826	0.815	.
V23RBFT	0.006640	0.006306	1.053000	0.937700	0.883700	0.838	0.873	.
V14AUR	0.006610	0.006785	0.974000	0.962100	0.919800	0.850	0.417	.
V55LHE	0.006240	0.006468	0.965000	0.000000	0.590500	0.862	0.157	.
V12LK	0.005918	0.005486	1.079000	0.801000	1.324100	0.873	0.077	.
V26WWCH	0.005801	0.010413	0.557000	0.000000	0.462400	0.883	0.885	.
V50CHE	0.005678	0.005941	0.956000	0.000000	0.509600	0.894	0.590	.
V86BC00	0.005379	0.005588	0.962000	0.000000	0.481700	0.904	0.069	.
V22SCR	0.003983	0.007149	0.557000	0.000000	0.317500	0.911	0.835	.
V8WNHE	0.003758	0.001583	2.374000	1.843200	1.709100	0.918	0.863	.
V85ROSE	0.003564	0.006391	0.558000	0.000000	0.331700	0.925	0.285	.
V62RBTR	0.003528	0.006332	0.557000	0.000000	0.281200	0.931	0.192	.
V38GAL	0.003497	0.006277	0.557000	0.323400	0.000000	0.938	0.828	.
V87LFC	0.003183	0.005712	0.557000	0.289600	0.000000	0.944	0.566	.
V45MGLK	0.002941	0.005278	0.557000	0.271900	0.000000	0.949	0.818	.
V41SPP	0.002919	0.001917	1.523000	1.200500	1.352200	0.954	0.897	.
V9SFW	0.002819	0.002623	1.075000	1.734700	1.525000	0.960	0.906	.
V53MB	0.002704	0.004852	0.557000	0.250000	0.000000	0.965	0.767	.
V57PINK	0.002686	0.004816	0.558000	0.000000	0.250000	0.970	0.265	.
V76GBB	0.002568	0.004606	0.557000	0.000000	0.220000	0.974	0.395	.
V70RSL	0.002557	0.004589	0.557000	0.236400	0.000000	0.979	0.835	.
V2EYR	0.002508	0.001941	1.292000	1.599500	1.440100	0.984	0.914	.
V102KING	0.002459	0.004408	0.558000	0.000000	0.236400	0.988	0.078	.
V51OWH	0.002364	0.004239	0.558000	0.000000	0.220000	0.993	0.528	.
V10WBSW	0.002324	0.001192	1.950000	1.760400	1.622600	0.997	0.984	.
V16ST	0.001754	0.001373	1.278000	1.493300	1.379200	1.000	0.762	.
V18YTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	.
V30BTR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	.
V31AMAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	.
V32SCC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	.
V39FHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	.

V40BRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V44MUSK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V47RFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V52TRM	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V580B0	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V60LFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V61SPW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V64BELL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V66CBW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V69SKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V71PD0V	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LL0R	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V79YTHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V84YRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V88WG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V90WTG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V92NFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V93DB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V94RBEE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V95HBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V96DF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V98FLAME	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Gippsland Ma\_Foothills Wo

	average	sd	ratio	ava	avb	cumsum	p
V17WPHE	0.026097	0.002383	10.951000	2.247700	0.000000	0.052 0.001	***
V34WSW	0.021402	0.002230	9.597000	1.856000	0.000000	0.094 0.001	***
V6WTTR	0.018324	0.001427	12.839000	0.000000	1.579900	0.130 0.001	***
V11CR	0.017226	0.001813	9.499000	0.000000	1.484400	0.164 0.005	**
V15STTH	0.017112	0.007416	2.307000	0.323400	1.788200	0.198 0.003	**
V40BRTH	0.016327	0.010384	1.572000	0.000000	1.423800	0.230 0.001	***
V27NHHE	0.015988	0.007215	2.216000	1.646300	0.256000	0.262 0.011	*
V25WAG	0.015952	0.001857	8.589000	1.376000	0.000000	0.293 0.001	***
V22SCR	0.015801	0.001670	9.460000	0.000000	1.364500	0.325 0.001	***
V26WWCH	0.013884	0.008667	1.602000	0.000000	1.210300	0.352 0.022	*
V18YTH	0.013759	0.008550	1.609000	0.000000	1.199300	0.379 0.022	*
V28VS	0.012735	0.007685	1.657000	0.000000	1.088900	0.404 0.020	*
V10WBWS	0.011739	0.009043	1.298000	1.760400	0.773600	0.428 0.093	.
V36F	0.011589	0.007893	1.468000	0.646500	1.569600	0.451 0.006	**
V33RWH	0.011462	0.006709	1.709000	0.579800	1.597500	0.473 0.027	*
V69SKF	0.010219	0.006162	1.658000	0.000000	0.890600	0.494 0.008	**
V4BTH	0.010179	0.009715	1.048000	1.184200	1.975000	0.514 0.350	
V23RBT	0.009465	0.006668	1.419000	0.937700	0.243500	0.532 0.293	
V46BHHE	0.009439	0.007230	1.305000	0.307900	0.931700	0.551 0.279	
V42SIL	0.009295	0.005353	1.736000	0.420400	0.761200	0.569 0.286	
V21ESP	0.009082	0.006693	1.357000	0.644000	1.346100	0.587 0.334	
V56WH	0.008800	0.007323	1.202000	0.674800	1.309900	0.605 0.088	.
V13RWB	0.008699	0.002320	3.750000	1.922100	1.170600	0.622 0.647	
V53MB	0.008525	0.006365	1.339000	0.250000	0.851600	0.639 0.029	*
V36YFHE	0.008313	0.004873	1.706000	1.243700	1.319700	0.655 0.721	

V65LWB	0.008250	0.008548	0.965000	0.741500	0.000000	0.671	0.142
V63DWS	0.008179	0.007487	1.092000	0.724800	0.243500	0.688	0.054
V81SHBC	0.008171	0.006178	1.323000	0.271900	0.807100	0.704	0.103
V19ER	0.008140	0.007125	1.143000	1.308600	0.654600	0.720	0.353
V91NMIN	0.008026	0.008354	0.961000	0.719700	0.000000	0.736	0.074
V7WEHE	0.007740	0.006507	1.189000	1.241500	1.318200	0.751	0.332
V29CST	0.007736	0.004933	1.568000	1.059100	0.659900	0.766	0.183
V20PCU	0.007716	0.008005	0.964000	0.000000	0.673000	0.782	0.186
V9SFW	0.007643	0.007705	0.992000	1.734700	1.081900	0.797	0.223
V56FTC	0.007448	0.006647	1.120000	0.615700	1.244700	0.811	0.293
V14AUR	0.006977	0.007154	0.975000	0.962100	0.987000	0.825	0.389
V35STP	0.006914	0.007551	0.916000	0.993200	1.011200	0.839	0.780
V43GCU	0.006636	0.007051	0.941000	0.000000	0.583000	0.852	0.530
V12LK	0.006350	0.005685	1.117000	0.801000	1.350100	0.865	0.040 *
V16LR	0.006246	0.006500	0.961000	1.184900	1.479800	0.877	0.823
V64BELL	0.005568	0.009988	0.557000	0.000000	0.492000	0.888	0.226
V50CHE	0.004608	0.008269	0.557000	0.000000	0.384600	0.897	0.698
V96DF	0.004006	0.007186	0.557000	0.000000	0.349000	0.905	0.099
V41SPP	0.003877	0.002906	1.334000	1.200500	1.526000	0.913	0.902
V24BFCS	0.003777	0.005287	0.714000	1.112500	0.794400	0.920	0.858
V61SPW	0.003744	0.006716	0.557000	0.000000	0.326200	0.927	0.108
V80RF	0.003648	0.006547	0.557000	0.000000	0.304500	0.935	0.854
V2EYR	0.003593	0.002576	1.394000	1.599500	1.316800	0.942	0.866
V38GAL	0.003574	0.006396	0.559000	0.323400	0.000000	0.949	0.795
V87LFC	0.003254	0.005822	0.559000	0.289600	0.000000	0.955	0.535
V8WNHE	0.003139	0.002678	1.172000	1.843200	1.582200	0.962	0.915
V580B0	0.003041	0.005456	0.557000	0.000000	0.261700	0.968	0.796
V83SFC	0.003041	0.005456	0.557000	0.000000	0.261700	0.974	0.888
V45MGLK	0.003006	0.005378	0.559000	0.271900	0.000000	0.980	0.796
V16ST	0.002663	0.001997	1.334000	1.493300	1.577800	0.985	0.207
V70RSL	0.002613	0.004676	0.559000	0.236400	0.000000	0.990	0.833
V62RBTR	0.002557	0.004588	0.557000	0.000000	0.220000	0.995	0.450
V66CBW	0.002557	0.004588	0.557000	0.000000	0.220000	1.000	0.523
V30BTR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V31AMAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V32SCC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V37WHIP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V39FHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V44MUSK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V47RFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V48YTBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V49LYRE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V51OWH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V52TRM	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V54STHR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V55LHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V57PINK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V60LFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V67GGC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V68PIL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V71PD0V	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V76GBB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V79YTHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V84YRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V85ROSE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V86BC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V88WG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA



V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V90WTG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V92NFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V93DB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V94RBEE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V95HBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V98FLAME	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V102KING	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Gippsland Ma\_Box-Ironbark

	average	sd	ratio	ava	avb	cumsum	p
V17WPHE	0.026261	0.003224	8.146000	2.247700	0.000000	0.046 0.001	***
V18YTH	0.022239	0.002654	8.378000	0.000000	1.909900	0.086 0.001	***
V34WSW	0.021534	0.002823	7.627000	1.856000	0.000000	0.124 0.001	***
V10WBWS	0.020600	0.003335	6.178000	1.760400	0.000000	0.160 0.001	***
V26WWCH	0.019377	0.002919	6.638000	0.000000	1.655500	0.195 0.001	***
V27NHHE	0.019175	0.005389	3.559000	1.646300	0.000000	0.229 0.002	**
V6WTTT	0.017796	0.001927	9.234000	0.000000	1.525100	0.260 0.001	***
V46BHHE	0.017556	0.007155	2.454000	0.307900	1.798900	0.291 0.001	***
V39FHE	0.017550	0.003257	5.388000	0.000000	1.532700	0.322 0.001	***
V25WAG	0.016052	0.002282	7.033000	1.376000	0.000000	0.351 0.001	***
V22SCR	0.015788	0.003354	4.707000	0.000000	1.350800	0.379 0.001	***
V40BRTT	0.015511	0.009337	1.661000	0.000000	1.379300	0.406 0.003	**
V15STTH	0.015362	0.007523	2.042000	0.323400	1.627000	0.433 0.007	**
V44MUSK	0.013318	0.008639	1.542000	0.000000	1.180800	0.457 0.006	**
V580B0	0.012439	0.003104	4.007000	0.000000	1.059200	0.479 0.001	***
V42SIL	0.012248	0.004880	2.510000	0.420400	1.255000	0.500 0.037	*
V75RCR	0.011824	0.003514	3.365000	0.000000	1.000900	0.521 0.001	***
V28VS	0.011169	0.006772	1.649000	0.000000	0.971800	0.541 0.064	.
V11CR	0.011098	0.006986	1.589000	0.000000	0.992900	0.561 0.166	.
V33RWH	0.010578	0.006786	1.559000	0.579800	1.512200	0.580 0.037	*
V16LR	0.010525	0.007973	1.320000	1.184900	0.576500	0.598 0.096	.
V36F	0.010144	0.006630	1.530000	0.646500	1.330200	0.616 0.048	*
V29CST	0.009753	0.005485	1.778000	1.059100	0.256000	0.633 0.036	*
V23RBFT	0.009549	0.007039	1.357000	0.937700	0.320500	0.650 0.293	.
V43GCU	0.009226	0.005611	1.644000	0.000000	0.818400	0.667 0.053	.
V35STP	0.009032	0.007151	1.263000	0.993200	0.656700	0.683 0.249	.
V36YFHE	0.008694	0.006441	1.350000	1.243700	1.383500	0.698 0.640	.
V2EYR	0.008634	0.006941	1.244000	1.599500	0.874900	0.713 0.168	.
V56WH	0.008626	0.006596	1.308000	0.674800	1.171900	0.729 0.118	.
V65LWB	0.008297	0.008644	0.960000	0.741500	0.000000	0.743 0.148	.
V63DWS	0.008199	0.007646	1.072000	0.724800	0.220000	0.758 0.047	*
V91NMIN	0.008072	0.008448	0.955000	0.719700	0.000000	0.772 0.079	.
V21ESP	0.007818	0.008323	0.939000	0.644000	0.000000	0.786 0.713	.
V7WEHE	0.007692	0.006430	1.196000	1.241500	1.296700	0.799 0.338	.
V4BTH	0.007495	0.007712	0.972000	1.184200	1.520900	0.813 0.747	.
V56FTC	0.007373	0.007510	0.982000	0.615700	0.281200	0.826 0.339	.
V66CBW	0.007079	0.007358	0.962000	0.000000	0.566600	0.838 0.004	**
V90WTG	0.006660	0.007437	0.896000	0.000000	0.542000	0.850 0.037	*
V70RSL	0.006539	0.006415	1.019000	0.236400	0.557400	0.862 0.256	.
V61SPW	0.006393	0.006678	0.957000	0.000000	0.593000	0.873 0.021	*
V19ER	0.006130	0.006577	0.932000	1.308600	0.846400	0.884 0.816	.
V14AUR	0.005432	0.006537	0.831000	0.962100	1.211600	0.893 0.657	.
V81SHBC	0.004610	0.006122	0.753000	0.271900	0.281200	0.902 0.932	.
V12LK	0.004495	0.005039	0.892000	0.801000	1.122800	0.910 0.304	.
V79YTHE	0.004087	0.007327	0.558000	0.000000	0.396100	0.917 0.040	*
V9SFW	0.004012	0.003799	1.056000	1.734700	1.472800	0.924 0.729	.
V30BTR	0.003950	0.007083	0.558000	0.000000	0.382900	0.931 0.641	.

V38GAL	0.003595	0.006455	0.557000	0.323400	0.000000	0.937	0.768
V13RWB	0.003563	0.001691	2.107000	1.922100	1.792200	0.944	0.997
V41SPP	0.003386	0.002315	1.463000	1.200500	1.440100	0.950	0.889
V87LFC	0.003273	0.005878	0.557000	0.289600	0.000000	0.955	0.554
V45MGLK	0.003023	0.005428	0.557000	0.271900	0.000000	0.961	0.783
V8WNHE	0.002915	0.000912	3.194000	1.843200	1.595400	0.966	0.940
V53MB	0.002779	0.004990	0.557000	0.250000	0.000000	0.971	0.756
V94RBEE	0.002642	0.004736	0.558000	0.000000	0.256000	0.976	0.433
V96DF	0.002642	0.004736	0.558000	0.000000	0.256000	0.980	0.359
V76GBB	0.002548	0.004573	0.557000	0.000000	0.210200	0.985	0.394
V16ST	0.002444	0.001755	1.393000	1.493300	1.425700	0.989	0.311
V88WG	0.002395	0.004296	0.557000	0.000000	0.210200	0.993	0.403
V95HBC	0.002395	0.004296	0.557000	0.000000	0.210200	0.997	0.042 *
V24BFCS	0.001441	0.001298	1.110000	1.112500	1.014400	1.000	0.983
V20PCU	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V31AMAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V32SCC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V37WHIP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V47RFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V48YTBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V49LYRE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V50CHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V51OWH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V52TRM	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V54STHR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V55LHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V57PINK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V60LFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V62RBTR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V64BELL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V67GGC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V68PTL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V69SKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V71PDV	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V80RF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V83SFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V84YRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V85ROSE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V86BCO0	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PCO0	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V92NFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V93DB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V98FLAME	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V102KING	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Gippsland Ma\_River Red Gu

	average	sd	ratio	ava	avb	cumsum	p
V32SCC	0.025596	0.002660	9.624000	0.000000	2.225000	0.041	0.001 ***
V13RWB	0.022078	0.001581	13.960000	1.922100	0.000000	0.077	0.001 ***
V10WBSW	0.020296	0.002871	7.069000	1.760400	0.000000	0.110	0.001 ***
V27NHHE	0.018894	0.005104	3.702000	1.646300	0.000000	0.140	0.001 ***

V2EYR	0.018457	0.002843	6.492000	1.599500	0.000000	0.170	0.001	***
V26WWCH	0.018125	0.001284	14.119000	0.000000	1.578000	0.199	0.002	**
V8WNHE	0.018039	0.006464	2.791000	1.843200	0.289600	0.228	0.001	***
V30BTR	0.017484	0.001776	9.844000	0.000000	1.520300	0.257	0.001	***
V31AMAG	0.016036	0.001581	10.146000	0.000000	1.393900	0.283	0.001	***
V60LFB	0.015147	0.003696	4.098000	0.000000	1.312300	0.307	0.001	***
V38GAL	0.014698	0.007189	2.044000	0.323400	1.582800	0.331	0.001	***
V47RFC	0.014352	0.001420	10.106000	0.000000	1.251400	0.354	0.001	***
V36YFHE	0.014260	0.009360	1.524000	1.243700	0.000000	0.377	0.013	*
V7WEHE	0.013756	0.008586	1.602000	1.241500	0.000000	0.399	0.004	**
V41SPP	0.013744	0.002390	5.750000	1.200500	0.000000	0.421	0.003	**
V69SKF	0.013273	0.001217	10.902000	0.000000	1.156400	0.443	0.001	***
V4BTH	0.013108	0.008293	1.581000	1.184200	0.000000	0.464	0.077	.
V70RSL	0.011108	0.007818	1.421000	0.236400	1.085200	0.482	0.010	**
V45MGLK	0.010974	0.005854	1.875000	0.271900	1.216900	0.500	0.002	**
V98FLAME	0.010959	0.006960	1.575000	0.000000	0.964700	0.517	0.003	**
V73JW	0.010616	0.006635	1.600000	0.000000	0.934100	0.534	0.001	***
V34WSW	0.010143	0.007370	1.376000	1.856000	0.961700	0.551	0.174	
V52TRM	0.009996	0.006422	1.556000	0.000000	0.871300	0.567	0.009	**
V18YTH	0.009754	0.010215	0.955000	0.000000	0.845000	0.583	0.253	
V93DB	0.009507	0.005742	1.656000	0.000000	0.829800	0.598	0.001	***
V91NMIN	0.008898	0.008710	1.022000	0.719700	0.767400	0.612	0.022	*
V15STTH	0.008597	0.008559	1.004000	0.323400	0.745400	0.626	0.498	
V36F	0.008595	0.004954	1.735000	0.646500	1.077300	0.640	0.116	
V6WTTR	0.008498	0.008891	0.956000	0.000000	0.736100	0.654	0.360	
V94RBEE	0.008405	0.005103	1.647000	0.000000	0.732200	0.667	0.001	***
V65LWB	0.008183	0.008484	0.965000	0.741500	0.000000	0.681	0.136	
V23RBFT	0.008089	0.005959	1.357000	0.937700	0.456500	0.694	0.611	
V63DWS	0.008008	0.008299	0.965000	0.724800	0.000000	0.707	0.061	.
V28VS	0.007914	0.008215	0.963000	0.000000	0.686000	0.720	0.576	
V35STP	0.007822	0.007933	0.986000	0.993200	1.638300	0.732	0.565	
V56WH	0.007810	0.005625	1.388000	0.674800	0.765000	0.745	0.184	
V21ESP	0.007696	0.008143	0.945000	0.644000	0.000000	0.757	0.708	
V59YR	0.007520	0.007810	0.963000	0.000000	0.651800	0.769	0.001	***
V42SIL	0.007277	0.009602	0.758000	0.420400	0.442300	0.781	0.775	
V56FTC	0.007269	0.006882	1.056000	0.615700	0.220000	0.793	0.361	
V88WG	0.007075	0.007399	0.956000	0.000000	0.612900	0.804	0.001	***
V90WTG	0.007075	0.007399	0.956000	0.000000	0.612900	0.816	0.015	*
V99WWT	0.007063	0.007361	0.959000	0.000000	0.615300	0.827	0.001	***
V580B0	0.007005	0.007268	0.964000	0.000000	0.611700	0.838	0.081	.
V9SFW	0.006866	0.003914	1.754000	1.734700	1.145500	0.849	0.360	
V33RWH	0.006745	0.006466	1.043000	0.579800	0.532700	0.860	0.593	
V20PCU	0.006711	0.007071	0.949000	0.000000	0.602800	0.871	0.483	
V16LR	0.006244	0.004942	1.264000	1.184900	1.252000	0.881	0.827	
V72CRP	0.006087	0.006321	0.963000	0.000000	0.545600	0.891	0.001	***
V92NFB	0.006062	0.006313	0.960000	0.000000	0.513100	0.901	0.007	**
V71PDOV	0.006011	0.006489	0.926000	0.000000	0.530500	0.910	0.002	**
V12LK	0.005937	0.005887	1.009000	0.801000	0.910300	0.920	0.064	.
V14AUR	0.005129	0.006478	0.792000	0.962100	1.237700	0.928	0.688	
V87LFC	0.005124	0.006716	0.763000	0.289600	0.314400	0.937	0.223	
V84YRTH	0.004535	0.008137	0.557000	0.000000	0.389600	0.944	0.040	*
V101LCOR	0.004040	0.007245	0.558000	0.000000	0.370000	0.951	0.001	***
V53MB	0.004022	0.005167	0.778000	0.250000	0.210200	0.957	0.570	
V29CST	0.003883	0.005041	0.770000	1.059100	0.776000	0.963	0.980	
V46BHHE	0.003418	0.006118	0.559000	0.307900	0.000000	0.969	0.985	
V74BCHE	0.003144	0.005642	0.557000	0.000000	0.261700	0.974	0.002	**
V81SHBC	0.003030	0.005425	0.559000	0.271900	0.000000	0.979	0.988	
V17WPHE	0.002749	0.001706	1.611000	2.247700	2.034900	0.983	0.978	
V24BFCS	0.002646	0.002193	1.206000	1.112500	1.328700	0.988	0.911	
V95HBC	0.002389	0.004287	0.557000	0.000000	0.198800	0.991	0.043	*
V16ST	0.002019	0.001634	1.236000	1.493300	1.343300	0.995	0.593	
V19ER	0.001923	0.001172	1.640000	1.308600	1.397300	0.998	0.995	
V25WAG	0.001422	0.001101	1.292000	1.376000	1.365200	1.000	0.956	
V11CR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	
V22SCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA	

V37WHIP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V39FHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V40BRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V43GCU	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V44MUSK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V48YTBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V49LYRE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V50CHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V51OWH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V54STHR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V55LHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V57PINK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V61SPW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V62RBTR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V64BELL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V66CBW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V67GGC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V68PIL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V76GBB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V79YTHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V80RF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V83SFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V85ROSE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V86BCO0	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PCO0	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V96DF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V102KING	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Montane Fore\_Foothills Wo

	average	sd	ratio	ava	avb	cumsum	p
V40BRTH	0.014435	0.009183	1.571800	0.000000	1.423800	0.042	0.011 *
V18YTH	0.012164	0.007560	1.609000	0.000000	1.199300	0.077	0.064 .
V26WWCH	0.010745	0.008003	1.342600	0.462400	1.210300	0.108	0.138
V22SCR	0.010509	0.005505	1.909200	0.317500	1.364500	0.138	0.032 *
V37WHIP	0.010114	0.006054	1.670700	1.020400	0.000000	0.168	0.022 *
V48YTBC	0.009915	0.005918	1.675400	0.958400	0.000000	0.196	0.036 *
V83SFC	0.009752	0.004877	1.999500	1.220000	0.261700	0.224	0.028 *
V10WBSW	0.009395	0.007408	1.268200	1.622600	0.773600	0.251	0.379
V67GGC	0.009162	0.005646	1.622600	0.926600	0.000000	0.278	0.007 **
V69SKF	0.009034	0.005447	1.658400	0.000000	0.890600	0.304	0.027 *
V53MB	0.008754	0.005324	1.644300	0.000000	0.851600	0.329	0.017 *
V33RWH	0.008585	0.007066	1.215100	0.753700	1.597500	0.354	0.267
V46BHHE	0.008556	0.006287	1.361000	0.828800	0.931700	0.379	0.484
V13RWB	0.008482	0.004846	1.750400	0.662400	1.170600	0.403	0.698
V49LYRE	0.007927	0.004849	1.634700	0.803100	0.000000	0.426	0.020 *
V68PIL	0.007799	0.004781	1.631300	0.785200	0.000000	0.449	0.022 *
V80RF	0.007785	0.006023	1.292600	0.913500	0.304500	0.471	0.122
V54STHR	0.007684	0.004615	1.665200	0.758900	0.000000	0.493	0.002 **
V23RBFT	0.007670	0.005612	1.366800	0.883700	0.243500	0.516	0.719
V28VS	0.007670	0.007611	1.007700	0.709200	1.088900	0.538	0.664
V43GCU	0.007662	0.005636	1.359400	1.256100	0.583000	0.560	0.212
V16LR	0.007478	0.006026	1.241100	1.023200	1.479800	0.582	0.657
V20PCU	0.006977	0.006456	1.080800	1.268100	0.673000	0.602	0.390
V19ER	0.006769	0.006493	1.042500	0.266900	0.654600	0.621	0.733
V29CST	0.006698	0.006812	0.983200	0.314400	0.659900	0.641	0.519
V50CHE	0.006550	0.006045	1.083500	0.509600	0.384600	0.659	0.446

V35STP	0.006186	0.006202	0.997400	0.944200	1.011200	0.677	0.855
V42SIL	0.006120	0.004742	1.290500	1.363600	0.761200	0.695	0.924
V24BFCS	0.005843	0.005215	1.120300	0.496700	0.794400	0.712	0.399
V14AUR	0.005747	0.006056	0.948900	0.919800	0.987000	0.729	0.589
V55LHE	0.005677	0.005865	0.967900	0.590500	0.000000	0.745	0.246
V36YFHE	0.005166	0.005585	0.925100	1.134500	1.319700	0.760	0.968
V9SFW	0.005041	0.006178	0.815900	1.525000	1.081900	0.774	0.595
V64BELL	0.004931	0.008845	0.557500	0.000000	0.492000	0.789	0.381
V86BC00	0.004867	0.005040	0.965600	0.481700	0.000000	0.803	0.103
V81SHBC	0.004290	0.004697	0.913300	1.191300	0.807100	0.815	0.958
V62RBTR	0.004175	0.005389	0.774800	0.281200	0.220000	0.827	0.194
V21ESP	0.003642	0.002780	1.310000	1.502100	1.346100	0.838	0.987
V96DF	0.003541	0.006353	0.557400	0.000000	0.349000	0.848	0.226
V4BTH	0.003496	0.002575	1.358000	2.294000	1.975000	0.858	0.958
V61SPW	0.003310	0.005938	0.557400	0.000000	0.326200	0.868	0.255
V8WNHE	0.003301	0.002559	1.290000	1.709100	1.582200	0.877	0.899
V85ROSE	0.003237	0.005792	0.558900	0.331700	0.000000	0.886	0.337
V7WEHE	0.002775	0.001747	1.588400	1.224500	1.318200	0.894	0.952
V27NHHE	0.002698	0.004842	0.557300	0.000000	0.256000	0.902	0.975
V580B0	0.002685	0.004816	0.557400	0.000000	0.261700	0.910	0.876
V11CR	0.002557	0.001689	1.513300	1.710400	1.484400	0.917	0.996
V63DWS	0.002440	0.004377	0.557500	0.000000	0.243500	0.924	0.851
V57PINK	0.002440	0.004365	0.558900	0.250000	0.000000	0.931	0.460
V76GBB	0.002313	0.004139	0.558900	0.220000	0.000000	0.938	0.590
V66CBW	0.002257	0.004050	0.557400	0.000000	0.220000	0.945	0.629
V102KING	0.002240	0.004008	0.558900	0.236400	0.000000	0.951	0.333
V41SPP	0.002181	0.001351	1.614700	1.352200	1.526000	0.958	0.940
V510WH	0.002147	0.003842	0.558900	0.220000	0.000000	0.964	0.582
V1GST	0.002076	0.002289	0.906700	1.379200	1.577800	0.970	0.513
V2EYR	0.002039	0.001545	1.319900	1.440100	1.316800	0.976	0.956
V15STTH	0.001903	0.001654	1.150800	1.857500	1.788200	0.981	0.991
V56WH	0.001891	0.001382	1.367800	1.486100	1.309900	0.987	0.981
V36F	0.001741	0.001033	1.685600	1.724600	1.569600	0.992	0.991
V6WTTR	0.001138	0.000630	1.805600	1.567100	1.579900	0.995	0.997
V56FTC	0.001005	0.000717	1.402700	1.231300	1.244700	0.998	0.999
V12LK	0.000762	0.000683	1.116400	1.324100	1.350100	1.000	0.999
V17WPHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V25WAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V30BTR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V31AMAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V32SCC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V34WSW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V38GAL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V39FHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V44MUSK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V45MGLK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V47RFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V52TRM	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V60LFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V65LWB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V70RSL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V71PD0V	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V79YTHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V84YRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V87LFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V88WG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

V90WTG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V91NMIN	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V92NFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V93DB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V94RBEE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V95HBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V98FLAME	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Montane Fore\_Box-Ironbark

	average	sd	ratio	ava	avb	cumsum	p
V18YTH	0.019614	0.002267	8.650000	0.000000	1.909900	0.042	0.001 ***
V10WBSW	0.016737	0.002289	7.312000	1.622600	0.000000	0.079	0.008 **
V39FHE	0.015508	0.003007	5.157000	0.000000	1.532700	0.112	0.003 **
V21ESP	0.015277	0.002850	5.360000	1.502100	0.000000	0.145	0.006 **
V40BRTH	0.013739	0.008267	1.662000	0.000000	1.379300	0.175	0.022 *
V20PCU	0.013073	0.001670	7.829000	1.268100	0.000000	0.203	0.009 **
V26WWCH	0.012932	0.006735	1.920000	0.462400	1.655500	0.231	0.033 *
V13RWB	0.012500	0.008069	1.549000	0.662400	1.792200	0.258	0.073 .
V83SFC	0.012497	0.001221	10.232000	1.220000	0.000000	0.285	0.003 **
V44MUSK	0.011793	0.007641	1.543000	0.000000	1.180800	0.310	0.010 **
V580B0	0.010960	0.002648	4.139000	0.000000	1.059200	0.334	0.002 **
V22SCR	0.010674	0.005558	1.920000	0.317500	1.350800	0.357	0.029 *
V46BHHE	0.010527	0.009610	1.095000	0.828800	1.798900	0.380	0.121
V75RCR	0.010410	0.003002	3.468000	0.000000	1.000900	0.402	0.001 ***
V37WHIP	0.010161	0.006135	1.656000	1.020400	0.000000	0.424	0.025 *
V56FTC	0.010047	0.005497	1.828000	1.231300	0.281200	0.446	0.038 *
V48YTBC	0.009965	0.006005	1.659000	0.958400	0.000000	0.468	0.027 *
V81SHBC	0.009699	0.005338	1.817000	1.191300	0.281200	0.489	0.022 *
V67GGC	0.009203	0.005719	1.609000	0.926600	0.000000	0.508	0.007 **
V80RF	0.009127	0.005635	1.620000	0.913500	0.000000	0.528	0.056 .
V16LR	0.008206	0.006541	1.255000	1.023200	0.576500	0.546	0.514
V11CR	0.008012	0.007131	1.124000	1.710400	0.992900	0.563	0.759
V49LYRE	0.007963	0.004911	1.621000	0.803100	0.000000	0.581	0.023 *
V4BTH	0.007900	0.002729	2.895000	2.294000	1.520900	0.598	0.721
V33RWH	0.007855	0.007080	1.109000	0.753700	1.512200	0.615	0.403
V23RBFT	0.007852	0.005901	1.331000	0.883700	0.320500	0.631	0.674
V68PIL	0.007835	0.004844	1.617000	0.785200	0.000000	0.648	0.023 *
V35STP	0.007792	0.006378	1.222000	0.944200	0.656700	0.665	0.584
V54STHR	0.007721	0.004680	1.650000	0.758900	0.000000	0.682	0.005 **
V28VS	0.007362	0.006716	1.096000	0.709200	0.971800	0.698	0.719
V19ER	0.007289	0.005572	1.308000	0.266900	0.846400	0.714	0.656
V36YFHE	0.006921	0.005444	1.271000	1.134500	1.383500	0.729	0.918
V66CBW	0.006194	0.006437	0.962000	0.000000	0.566600	0.742	0.020 *
V24BFCS	0.005995	0.005034	1.191000	0.496700	1.014400	0.755	0.383
V2EYR	0.005841	0.005810	1.005000	1.440100	0.874900	0.768	0.604
V90WTG	0.005838	0.006497	0.899000	0.000000	0.542000	0.780	0.102
V70RSL	0.005780	0.006013	0.961000	0.000000	0.557400	0.793	0.354
V55LHE	0.005702	0.005915	0.964000	0.590500	0.000000	0.805	0.259
V61SPW	0.005691	0.005950	0.956000	0.000000	0.593000	0.817	0.056 .
V50CHE	0.005164	0.005411	0.954000	0.509600	0.000000	0.829	0.659
V86BC00	0.004890	0.005087	0.961000	0.481700	0.000000	0.839	0.109
V43GCU	0.004840	0.005651	0.857000	1.256100	0.818400	0.850	0.869
V29CST	0.004252	0.005499	0.773000	0.314400	0.256000	0.859	0.964
V14AUR	0.004172	0.005415	0.771000	0.919800	1.211600	0.868	0.827
V36F	0.004016	0.002231	1.800000	1.724600	1.330200	0.876	0.691
V79YTHE	0.003656	0.006555	0.558000	0.000000	0.396100	0.884	0.206
V30BTR	0.003534	0.006336	0.558000	0.000000	0.382900	0.892	0.831
V76GBB	0.003414	0.004520	0.755000	0.220000	0.210200	0.899	0.289

V56WH	0.003383	0.002341	1.445000	1.486100	1.171900	0.907	0.805
V85ROSE	0.003252	0.005834	0.557000	0.331700	0.000000	0.914	0.340
V62RBTR	0.003172	0.005698	0.557000	0.281200	0.000000	0.920	0.356
V8WNHE	0.002763	0.002154	1.282000	1.709100	1.595400	0.926	0.951
V15STTH	0.002604	0.001970	1.321000	1.857500	1.627000	0.932	0.961
V57PINK	0.002450	0.004397	0.557000	0.250000	0.000000	0.937	0.474
V9SFW	0.002418	0.002010	1.203000	1.525000	1.472800	0.943	0.953
V94RBEE	0.002363	0.004237	0.558000	0.000000	0.256000	0.948	0.586
V96DF	0.002363	0.004237	0.558000	0.000000	0.256000	0.953	0.522
V102KING	0.002249	0.004035	0.557000	0.236400	0.000000	0.958	0.329
V7WEHE	0.002224	0.001655	1.344000	1.224500	1.296700	0.963	0.988
V51OWH	0.002157	0.003870	0.557000	0.220000	0.000000	0.967	0.606
V88WG	0.002119	0.003801	0.557000	0.000000	0.210200	0.972	0.521
V95HBC	0.002119	0.003801	0.557000	0.000000	0.210200	0.976	0.321
V12LK	0.002086	0.000765	2.726000	1.324100	1.122800	0.981	0.619
V63DWS	0.002031	0.003641	0.558000	0.000000	0.220000	0.985	0.911
V42SIL	0.002007	0.001772	1.133000	1.363600	1.255000	0.990	1.000
V16ST	0.001927	0.000613	3.143000	1.379200	1.425700	0.994	0.639
V41SPP	0.001767	0.001227	1.439000	1.352200	1.440100	0.998	0.965
V6WTR	0.001142	0.000614	1.860000	1.567100	1.525100	1.000	0.997
V17WPHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V25WAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V27NHHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V31AMAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V32SCC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V34WSW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V38GAL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V45MGLK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V47RFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V52TRM	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V53MB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V60LFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V64BELL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V65LWB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V69SKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V71PD0V	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V84YRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V87LFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V91NMIN	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V92NFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V93DB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V98FLAME	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Montane Fore\_River Red Gu

	average	sd	ratio	ava	avb	cumsum	p
V4BTH	0.023240	0.001423	16.334000	2.294000	0.000000	0.032	0.001 ***
V32SCC	0.022619	0.002319	9.752000	0.000000	2.225000	0.062	0.002 **
V17WPHE	0.020648	0.001817	11.364000	0.000000	2.034900	0.090	0.011 *
V11CR	0.017360	0.001975	8.790000	1.710400	0.000000	0.114	0.002 **
V10WBSW	0.016529	0.001948	8.485000	1.622600	0.000000	0.136	0.003 **

V38GAL	0.016118	0.001999	8.065000	0.000000	1.582800	0.158	0.001	***
V30BTR	0.015451	0.001552	9.955000	0.000000	1.520300	0.179	0.001	***
V21ESP	0.015090	0.002641	5.713000	1.502100	0.000000	0.200	0.003	**
V2EYR	0.014573	0.001010	14.428000	1.440100	0.000000	0.220	0.002	**
V8WNHE	0.014442	0.006232	2.317000	1.709100	0.289600	0.239	0.006	**
V31AMAG	0.014171	0.001380	10.268000	0.000000	1.393900	0.258	0.002	**
V25WAG	0.013859	0.001151	12.039000	0.000000	1.365200	0.277	0.003	**
V41SPP	0.013725	0.001684	8.149000	1.352200	0.000000	0.296	0.004	**
V60LFB	0.013381	0.003234	4.138000	0.000000	1.312300	0.314	0.001	***
V47RFC	0.012687	0.001289	9.845000	0.000000	1.251400	0.331	0.001	***
V43GCU	0.012658	0.001321	9.581000	1.256100	0.000000	0.348	0.003	**
V7WEHE	0.012401	0.000859	14.431000	1.224500	0.000000	0.365	0.010	**
V26WWCH	0.012397	0.005637	2.199000	0.462400	1.578000	0.382	0.066	.
V83SFC	0.012343	0.000888	13.906000	1.220000	0.000000	0.399	0.002	**
V45MGLK	0.012337	0.001123	10.986000	0.000000	1.216900	0.416	0.002	**
V81SHBC	0.012054	0.001019	11.835000	1.191300	0.000000	0.432	0.006	**
V69SKF	0.011732	0.001094	10.720000	0.000000	1.156400	0.448	0.003	**
V42SIL	0.011523	0.004695	2.455000	1.363600	0.442300	0.464	0.037	*
V19ER	0.011415	0.005033	2.268000	0.266900	1.397300	0.479	0.027	*
V36YFHE	0.011410	0.006858	1.664000	1.134500	0.000000	0.495	0.126	
V15STTH	0.011292	0.008100	1.394000	1.857500	0.745400	0.510	0.133	
V70RSL	0.010957	0.007153	1.532000	0.000000	1.085200	0.525	0.006	**
V56FTC	0.010350	0.004225	2.450000	1.231300	0.220000	0.539	0.029	*
V37WHIP	0.010040	0.006016	1.669000	1.020400	0.000000	0.552	0.024	*
V48YTBC	0.009839	0.005880	1.673000	0.958400	0.000000	0.566	0.028	*
V34WSW	0.009813	0.006345	1.546000	0.000000	0.961700	0.579	0.197	
V98FLAME	0.009699	0.006152	1.577000	0.000000	0.964700	0.592	0.010	**
V73JW	0.009395	0.005864	1.602000	0.000000	0.934100	0.605	0.003	**
V67GGC	0.009094	0.005611	1.621000	0.926600	0.000000	0.618	0.006	**
V80RF	0.009018	0.005525	1.632000	0.913500	0.000000	0.630	0.054	.
V52TRM	0.008836	0.005669	1.559000	0.000000	0.871300	0.642	0.032	*
V6WTTT	0.008775	0.007475	1.174000	1.567100	0.736100	0.654	0.304	
V18YTH	0.008617	0.009023	0.955000	0.000000	0.845000	0.665	0.462	
V24BFCS	0.008611	0.005836	1.475000	0.496700	1.328700	0.677	0.030	*
V93DB	0.008405	0.005073	1.657000	0.000000	0.829800	0.689	0.003	**
V91NMN	0.007934	0.008238	0.963000	0.000000	0.767400	0.699	0.077	.
V46BHHE	0.007914	0.008183	0.967000	0.828800	0.000000	0.710	0.678	
V49LYRE	0.007869	0.004819	1.633000	0.803100	0.000000	0.721	0.027	*
V33RWH	0.007804	0.006307	1.237000	0.753700	0.532700	0.731	0.430	
V68PIL	0.007742	0.004750	1.630000	0.785200	0.000000	0.742	0.021	*
V54STHR	0.007627	0.004585	1.663000	0.758900	0.000000	0.752	0.003	**
V20PCU	0.007523	0.006020	1.250000	1.268100	0.602800	0.762	0.202	
V94RBEE	0.007429	0.004516	1.645000	0.000000	0.732200	0.772	0.004	**
V56WH	0.007231	0.004781	1.512000	1.486100	0.765000	0.782	0.237	
V28VS	0.007207	0.007247	0.994000	0.709200	0.686000	0.792	0.770	
V29CST	0.007165	0.004999	1.433000	0.314400	0.776000	0.802	0.355	
V35STP	0.007050	0.006207	1.136000	0.944200	1.638300	0.811	0.772	
V59YR	0.006644	0.006900	0.963000	0.000000	0.651800	0.820	0.018	*
V23RBF	0.006615	0.005151	1.284000	0.883700	0.456500	0.829	0.873	
V36F	0.006534	0.001821	3.589000	1.724600	1.077300	0.838	0.450	
V13RWB	0.006293	0.007149	0.880000	0.662400	0.000000	0.847	0.933	
V16LR	0.006278	0.005139	1.222000	1.023200	1.252000	0.855	0.852	
V88WG	0.006250	0.006536	0.956000	0.000000	0.612900	0.864	0.020	*
V90WTG	0.006250	0.006536	0.956000	0.000000	0.612900	0.872	0.066	.
V99WWT	0.006243	0.006502	0.960000	0.000000	0.615300	0.881	0.017	*
V580B0	0.006193	0.006425	0.964000	0.000000	0.611700	0.889	0.252	
V55LHE	0.005637	0.005827	0.967000	0.590500	0.000000	0.897	0.277	
V72CRP	0.005399	0.005608	0.963000	0.000000	0.545600	0.904	0.018	*
V92NFB	0.005341	0.005564	0.960000	0.000000	0.513100	0.911	0.088	.
V71PD0V	0.005320	0.005756	0.924000	0.000000	0.530500	0.919	0.034	*
V50CHE	0.005101	0.005325	0.958000	0.509600	0.000000	0.926	0.639	
V86BC00	0.004831	0.005006	0.965000	0.481700	0.000000	0.932	0.107	
V9SFW	0.004284	0.002149	1.993000	1.525000	1.145500	0.938	0.684	
V12LK	0.004232	0.005626	0.752000	1.324100	0.910300	0.944	0.375	
V14AUR	0.004098	0.005269	0.778000	0.919800	1.237700	0.949	0.862	



V84YRTH	0.004003	0.007182	0.557000	0.000000	0.389600	0.955	0.188
V101LCOR	0.003592	0.006442	0.558000	0.000000	0.370000	0.960	0.190
V22SCR	0.003532	0.006323	0.559000	0.317500	0.000000	0.964	0.885
V85ROSE	0.003214	0.005752	0.559000	0.331700	0.000000	0.969	0.381
V62RBTR	0.003128	0.005600	0.559000	0.281200	0.000000	0.973	0.393
V87LFC	0.003051	0.005472	0.558000	0.000000	0.314400	0.977	0.617
V74BCHE	0.002765	0.004961	0.557000	0.000000	0.261700	0.981	0.179
V57PINK	0.002422	0.004335	0.559000	0.250000	0.000000	0.984	0.494
V76GBB	0.002296	0.004109	0.559000	0.220000	0.000000	0.987	0.562
V102KING	0.002224	0.003981	0.559000	0.236400	0.000000	0.990	0.367
V53MB	0.002160	0.003875	0.557000	0.000000	0.210200	0.993	0.910
V51OWH	0.002132	0.003815	0.559000	0.220000	0.000000	0.996	0.624
V95HBC	0.002101	0.003770	0.557000	0.000000	0.198800	0.999	0.344
V16ST	0.000715	0.000313	2.283000	1.379200	1.343300	1.000	1.000
V27NHHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V39FHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V40BRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V44MUSK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V61SPW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V63DWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V64BELL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V65LWB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V66CBW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V79YTHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V96DF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Foothills Wo\_Box-Ironbark

	average	sd	ratio	ava	avb	cumsum	p
V39FHE	0.015833	0.002871	5.514000	0.000000	1.532700	0.047	0.001 ***
V21ESP	0.014135	0.003111	4.543000	1.346100	0.000000	0.089	0.009 **
V44MUSK	0.012037	0.007747	1.554000	0.000000	1.180800	0.125	0.007 **
V75RCR	0.010634	0.002985	3.562000	0.000000	1.000900	0.157	0.001 ***
V56FTC	0.010423	0.005633	1.850000	1.244700	0.281200	0.188	0.026 *
V16LR	0.009727	0.006963	1.397000	1.479800	0.576500	0.217	0.188
V40BRTH	0.009298	0.009205	1.010000	1.423800	1.379300	0.245	0.206
V69SKF	0.009269	0.005598	1.656000	0.890600	0.000000	0.273	0.024 *
V46BHHE	0.009105	0.006329	1.439000	0.931700	1.798900	0.300	0.349
V53MB	0.008985	0.005474	1.641000	0.851600	0.000000	0.327	0.018 *
V580B0	0.008774	0.004921	1.783000	0.261700	1.059200	0.353	0.027 *
V35STP	0.008296	0.006636	1.250000	1.011200	0.656700	0.378	0.438
V10WBSW	0.008277	0.008818	0.939000	0.773600	0.000000	0.402	0.651
V18YTH	0.007632	0.008144	0.937000	1.199300	1.909900	0.425	0.593
V81SHBC	0.007489	0.005740	1.305000	0.807100	0.281200	0.447	0.203
V20PCU	0.006999	0.007268	0.963000	0.673000	0.000000	0.468	0.347
V19ER	0.006999	0.005848	1.197000	0.654600	0.846400	0.489	0.725
V29CST	0.006862	0.006603	1.039000	0.659900	0.256000	0.510	0.449
V43GCU	0.006594	0.005495	1.200000	0.583000	0.818400	0.529	0.528
V13RWB	0.006454	0.003518	1.834000	1.170600	1.792200	0.549	0.929
V11CR	0.006420	0.006540	0.982000	1.484400	0.992900	0.568	0.923
V28VS	0.006385	0.006620	0.964000	1.088900	0.971800	0.587	0.885
V61SPW	0.006374	0.006302	1.011000	0.326200	0.593000	0.606	0.024 *
V66CBW	0.006186	0.005875	1.053000	0.220000	0.566600	0.624	0.031 *
V26WWCH	0.006051	0.007359	0.822000	1.210300	1.655500	0.642	0.871
V90WTG	0.005966	0.006614	0.902000	0.000000	0.542000	0.660	0.088 .
V70RSL	0.005903	0.006116	0.965000	0.000000	0.557400	0.678	0.368

V9SFW	0.005785	0.005795	0.998000	1.081900	1.472800	0.695	0.523
V42SIL	0.005356	0.004742	1.130000	0.761200	1.255000	0.711	0.958
V2EYR	0.005255	0.005672	0.927000	1.316800	0.874900	0.727	0.768
V64BELL	0.005057	0.009076	0.557000	0.492000	0.000000	0.742	0.274
V4BTH	0.005028	0.003157	1.593000	1.975000	1.520900	0.757	0.859
V96DF	0.004848	0.006302	0.769000	0.349000	0.256000	0.771	0.074
V23RBFT	0.004574	0.005837	0.784000	0.243500	0.320500	0.785	0.980
V36YFHE	0.004518	0.002675	1.689000	1.319700	1.383500	0.798	0.981
V14AUR	0.004445	0.005204	0.854000	0.987000	1.211600	0.812	0.817
V50CHE	0.004163	0.007474	0.557000	0.384600	0.000000	0.824	0.783
V79YTHE	0.003726	0.006667	0.559000	0.000000	0.396100	0.835	0.182
V30BTR	0.003602	0.006445	0.559000	0.000000	0.382900	0.846	0.822
V63DWS	0.003558	0.004682	0.760000	0.243500	0.220000	0.857	0.675
V24BFCS	0.003325	0.004364	0.762000	0.794400	1.014400	0.867	0.882
V80RF	0.003296	0.005917	0.557000	0.304500	0.000000	0.876	0.885
V7WEHE	0.003045	0.002323	1.311000	1.318200	1.296700	0.885	0.925
V16ST	0.002847	0.001972	1.444000	1.577800	1.425700	0.894	0.152
V27NHHE	0.002771	0.004976	0.557000	0.256000	0.000000	0.902	0.964
V83SFC	0.002755	0.004946	0.557000	0.261700	0.000000	0.910	0.897
V15STTH	0.002694	0.001759	1.532000	1.788200	1.627000	0.918	0.958
V36F	0.002586	0.002274	1.137000	1.569600	1.330200	0.926	0.957
V94RBEE	0.002409	0.004310	0.559000	0.000000	0.256000	0.933	0.561
V12LK	0.002400	0.001272	1.887000	1.350100	1.122800	0.941	0.525
V62RBTR	0.002317	0.004159	0.557000	0.220000	0.000000	0.947	0.575
V8WNHE	0.002311	0.000652	3.548000	1.582200	1.595400	0.954	0.968
V76GBB	0.002287	0.004092	0.559000	0.000000	0.210200	0.961	0.586
V22SCR	0.002258	0.001532	1.474000	1.364500	1.350800	0.968	0.963
V56WH	0.002206	0.001744	1.265000	1.309900	1.171900	0.975	0.958
V88WG	0.002163	0.003870	0.559000	0.000000	0.210200	0.981	0.455
V95HBC	0.002163	0.003870	0.559000	0.000000	0.210200	0.987	0.254
V33RWH	0.001840	0.001210	1.520000	1.597500	1.512200	0.993	0.991
V41SPP	0.001677	0.001086	1.544000	1.526000	1.440100	0.998	0.967
V6WTR	0.000709	0.000533	1.332000	1.579900	1.525100	1.000	1.000
V17WPHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V25WAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V31AMAG	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V32SCC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V34WSW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V37WHIP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V38GAL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V45MGLK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V47RFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V48YIBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V49LYRE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V51OWH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V52TRM	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V54STHR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V55LHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V57PINK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V59YR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V60LFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V65LWB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V67GGC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V68PIL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V71PD0V	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V72CRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V73JW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V74BCHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V84YRTH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V85ROSE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V86BC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V87LFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V91NMIN	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V92NFB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V93DB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V98FLAME	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V99WWT	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V101LCOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V102KING	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Foothills Wo\_River Red Gu

	average	sd	ratio	ava	avb	cumsum	p
V32SCC	0.023093	0.001828	12.633000	0.000000	2.225000	0.035 0.001	***
V17WPHE	0.021080	0.001241	16.985000	0.000000	2.034900	0.067 0.008	**
V4BTH	0.020489	0.002659	7.707000	1.975000	0.000000	0.098 0.003	**
V38GAL	0.016457	0.001736	9.477000	0.000000	1.582800	0.123 0.001	***
V41SPP	0.015828	0.001134	13.956000	1.526000	0.000000	0.146 0.001	***
V30BTR	0.015775	0.001205	13.087000	0.000000	1.520300	0.170 0.002	**
V11CR	0.015410	0.001314	11.727000	1.484400	0.000000	0.194 0.012	*
V40BRTH	0.014624	0.009247	1.582000	1.423800	0.000000	0.216 0.019	*
V31AMAG	0.014468	0.001047	13.821000	0.000000	1.393900	0.238 0.003	**
V25WAG	0.014149	0.000727	19.475000	0.000000	1.365200	0.259 0.001	***
V22SCR	0.014138	0.001253	11.280000	1.364500	0.000000	0.280 0.005	**
V21ESP	0.013956	0.002919	4.781000	1.346100	0.000000	0.301 0.004	**
V7WEHE	0.013692	0.003128	4.377000	1.318200	0.000000	0.322 0.005	**
V2EYR	0.013677	0.002086	6.556000	1.316800	0.000000	0.343 0.001	***
V60LFB	0.013662	0.003176	4.302000	0.000000	1.312300	0.363 0.001	***
V36YFHE	0.013654	0.002185	6.250000	1.319700	0.000000	0.384 0.024	*
V8WNHE	0.013515	0.005982	2.259000	1.582200	0.289600	0.404 0.009	**
V47RFC	0.012953	0.001004	12.896000	0.000000	1.251400	0.424 0.001	***
V45MGLK	0.012595	0.000795	15.834000	0.000000	1.216900	0.443 0.001	***
V13RWB	0.012138	0.001836	6.609000	1.170600	0.000000	0.461 0.076	.
V70RSL	0.011186	0.007252	1.543000	0.000000	1.085200	0.478 0.005	**
V15STTH	0.011042	0.008000	1.380000	1.788200	0.745400	0.495 0.162	
V33RWH	0.011004	0.005906	1.863000	1.597500	0.532700	0.511 0.043	*
V56FTC	0.010724	0.004330	2.477000	1.244700	0.220000	0.528 0.015	*
V34WSW	0.010020	0.006434	1.557000	0.000000	0.961700	0.543 0.161	
V98FLAME	0.009901	0.006236	1.588000	0.000000	0.964700	0.558 0.002	**
V46BHHE	0.009696	0.006173	1.571000	0.931700	0.000000	0.573 0.259	
V73JW	0.009590	0.005943	1.614000	0.000000	0.934100	0.587 0.002	**
V18YTH	0.009296	0.008040	1.156000	1.199300	0.845000	0.601 0.377	
V52TRM	0.009021	0.005747	1.570000	0.000000	0.871300	0.615 0.024	*
V6WTTR	0.008899	0.007759	1.147000	1.579900	0.736100	0.628 0.265	
V93DB	0.008581	0.005139	1.670000	0.000000	0.829800	0.641 0.001	***
V42SIL	0.008525	0.004802	1.776000	0.761200	0.442300	0.654 0.479	
V81SHBC	0.008439	0.005218	1.617000	0.807100	0.000000	0.667 0.071	.
V10WBSW	0.008169	0.008666	0.943000	0.773600	0.000000	0.679 0.652	
V91NMIN	0.008103	0.008379	0.967000	0.000000	0.767400	0.691 0.056	.
V19ER	0.007916	0.006665	1.188000	0.654600	1.397300	0.703 0.404	
V53MB	0.007757	0.005181	1.497000	0.851600	0.210200	0.715 0.045	*
V28VS	0.007735	0.007384	1.048000	1.088900	0.686000	0.727 0.632	
V94RBEE	0.007585	0.004574	1.658000	0.000000	0.732200	0.738 0.004	**
V20PCU	0.007072	0.006526	1.084000	0.673000	0.602800	0.749 0.311	
V29CST	0.006866	0.005049	1.360000	0.659900	0.776000	0.759 0.433	
V59YR	0.006784	0.007017	0.967000	0.000000	0.651800	0.769 0.009	**
V35STP	0.006652	0.006625	1.004000	1.011200	1.638300	0.779 0.803	
V88WG	0.006382	0.006647	0.960000	0.000000	0.612900	0.789 0.010	**
V90WTG	0.006382	0.006647	0.960000	0.000000	0.612900	0.799 0.057	.
V99WWT	0.006373	0.006612	0.964000	0.000000	0.615300	0.808 0.010	**
V580B0	0.006330	0.006124	1.034000	0.261700	0.611700	0.818 0.209	
V26WWCH	0.005950	0.006536	0.910000	1.210300	1.578000	0.827 0.892	

V43GCU	0.005949	0.006303	0.944000	0.583000	0.000000	0.836	0.743
V9SFW	0.005874	0.004177	1.406000	1.081900	1.145500	0.845	0.493
V5GWH	0.005644	0.004760	1.186000	1.309900	0.765000	0.853	0.564
V72CRP	0.005509	0.005702	0.966000	0.000000	0.545600	0.862	0.012 *
V24BFCS	0.005494	0.005150	1.067000	0.794400	1.328700	0.870	0.473
V92NFB	0.005455	0.005659	0.964000	0.000000	0.513100	0.878	0.081 .
V71PD0V	0.005431	0.005852	0.928000	0.000000	0.530500	0.886	0.026 *
V3GF	0.005121	0.001989	2.575000	1.569600	1.077300	0.894	0.576
V64BELL	0.004995	0.008940	0.559000	0.492000	0.000000	0.902	0.340
V23RBFT	0.004889	0.004924	0.993000	0.243500	0.456500	0.909	0.981
V12LK	0.004650	0.005759	0.808000	1.350100	0.910300	0.916	0.271
V14AUR	0.004157	0.005215	0.797000	0.987000	1.237700	0.922	0.851
V50CHE	0.004108	0.007354	0.559000	0.384600	0.000000	0.928	0.782
V84YRTH	0.004088	0.007314	0.559000	0.000000	0.389600	0.935	0.139
V69SKF	0.003666	0.005226	0.701000	0.890600	1.156400	0.940	0.816
V101LCOR	0.003664	0.006556	0.559000	0.000000	0.370000	0.946	0.135
V96DF	0.003588	0.006422	0.559000	0.349000	0.000000	0.951	0.223
V61SPW	0.003353	0.006002	0.559000	0.326200	0.000000	0.956	0.238
V80RF	0.003252	0.005822	0.559000	0.304500	0.000000	0.961	0.907
V87LFC	0.003113	0.005569	0.559000	0.000000	0.314400	0.966	0.587
V74BCHE	0.002825	0.005054	0.559000	0.000000	0.261700	0.970	0.125
V27NHHE	0.002735	0.004896	0.559000	0.256000	0.000000	0.974	0.967
V83SFC	0.002720	0.004869	0.559000	0.261700	0.000000	0.978	0.930
V16LR	0.002626	0.002077	1.264000	1.479800	1.252000	0.982	0.987
V16ST	0.002484	0.002388	1.040000	1.577800	1.343300	0.986	0.288
V63DWS	0.002472	0.004425	0.559000	0.243500	0.000000	0.990	0.814
V62RBTR	0.002287	0.004094	0.559000	0.220000	0.000000	0.993	0.612
V66CBW	0.002287	0.004094	0.559000	0.220000	0.000000	0.997	0.602
V95HBC	0.002146	0.003840	0.559000	0.000000	0.198800	1.000	0.244
V37WHIP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V39FHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V44MUSK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V48YTB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V49LYRE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V51OWH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V54STHR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V55LHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V57PINK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V65LWB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V67GGC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V68PIL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V75RCR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V76GBB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V79YTHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V85ROSE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V86BC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V102KING	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Contrast: Box-Ironbark\_River Red Gu

	average	sd	ratio	ava	avb	cumsum	p
V32SCC	0.023209	0.002485	9.340000	0.000000	2.225000	0.036	0.001 ***
V17WPHE	0.021185	0.001961	10.802000	0.000000	2.034900	0.068	0.004 **
V46BHHE	0.018779	0.002092	8.977000	1.798900	0.000000	0.097	0.001 ***
V13RWB	0.018603	0.002860	6.505000	1.792200	0.000000	0.126	0.001 ***
V38GAL	0.016539	0.002119	7.804000	0.000000	1.582800	0.151	0.001 ***
V4BTH	0.015839	0.002532	6.255000	1.520900	0.000000	0.175	0.013 *

V39FHE	0.015712	0.002885	5.447000	1.532700	0.000000	0.200	0.004	**
V41SPP	0.014960	0.001224	12.222000	1.440100	0.000000	0.222	0.002	**
V31AMAG	0.014541	0.001484	9.795000	0.000000	1.393900	0.245	0.003	**
V36YFHE	0.014477	0.004922	2.941000	1.383500	0.000000	0.267	0.015	*
V25WAG	0.014220	0.001253	11.353000	0.000000	1.365200	0.289	0.003	**
V22SCR	0.014102	0.002784	5.066000	1.350800	0.000000	0.311	0.005	**
V40BRTH	0.013917	0.008320	1.673000	1.379300	0.000000	0.332	0.012	*
V8WNHE	0.013741	0.005715	2.405000	1.595400	0.289600	0.353	0.006	**
V60LFB	0.013731	0.003352	4.097000	0.000000	1.312300	0.374	0.001	***
V7WEHE	0.013625	0.003185	4.278000	1.296700	0.000000	0.395	0.003	**
V47RFC	0.013017	0.001371	9.494000	0.000000	1.251400	0.415	0.001	***
V45MGLK	0.012658	0.001205	10.507000	0.000000	1.216900	0.435	0.001	***
V30BTR	0.012531	0.007039	1.780000	0.382900	1.520300	0.454	0.011	*
V69SKF	0.012038	0.001175	10.245000	0.000000	1.156400	0.472	0.004	**
V44MUSK	0.011946	0.007696	1.552000	1.180800	0.000000	0.491	0.011	*
V18YTH	0.011253	0.009055	1.243000	1.909900	0.845000	0.508	0.093	.
V42SIL	0.011190	0.003985	2.808000	1.255000	0.442300	0.525	0.065	.
V35STP	0.010880	0.007777	1.399000	0.656700	1.638300	0.542	0.074	.
V75RCR	0.010550	0.002971	3.552000	1.000900	0.000000	0.558	0.001	***
V33RWH	0.010203	0.005935	1.719000	1.512200	0.532700	0.574	0.060	.
V34WSW	0.010070	0.006524	1.544000	0.000000	0.961700	0.589	0.165	.
V11CR	0.009963	0.006247	1.595000	0.992900	0.000000	0.605	0.362	.
V98FLAME	0.009949	0.006321	1.574000	0.000000	0.964700	0.620	0.007	**
V73JW	0.009637	0.006026	1.599000	0.000000	0.934100	0.635	0.001	***
V15STTH	0.009594	0.007905	1.214000	1.627000	0.745400	0.649	0.351	.
V52TRM	0.009066	0.005827	1.556000	0.000000	0.871300	0.663	0.021	*
V2EYR	0.009033	0.005592	1.615000	0.874900	0.000000	0.677	0.118	.
V93DB	0.008624	0.005214	1.654000	0.000000	0.829800	0.690	0.001	***
V70RSL	0.008584	0.006538	1.313000	0.557400	1.085200	0.704	0.055	.
V6WTTR	0.008576	0.007595	1.129000	1.525100	0.736100	0.717	0.326	.
V43GCU	0.008275	0.004993	1.657000	0.818400	0.000000	0.730	0.139	.
V91NMIN	0.008145	0.008464	0.962000	0.000000	0.767400	0.742	0.045	*
V16LR	0.007429	0.006376	1.165000	0.576500	1.252000	0.753	0.666	.
V28VS	0.007148	0.006803	1.051000	0.971800	0.686000	0.764	0.793	.
V29CST	0.006978	0.005342	1.306000	0.256000	0.776000	0.775	0.420	.
V59YR	0.006818	0.007086	0.962000	0.000000	0.651800	0.786	0.013	*
V580B0	0.006742	0.004954	1.361000	1.059200	0.611700	0.796	0.157	.
V90WTG	0.006683	0.006034	1.107000	0.542000	0.612900	0.806	0.045	*
V94RBEE	0.006671	0.005063	1.318000	0.256000	0.732200	0.817	0.006	**
V88WG	0.006408	0.005997	1.069000	0.210200	0.612900	0.826	0.014	*
V99WWT	0.006405	0.006678	0.959000	0.000000	0.615300	0.836	0.014	*
V66CBW	0.006280	0.006500	0.966000	0.566600	0.000000	0.846	0.033	*
V19ER	0.006192	0.005991	1.034000	0.846400	1.397300	0.855	0.854	.
V20PCU	0.006104	0.006440	0.948000	0.000000	0.602800	0.865	0.710	.
V61SPW	0.005762	0.006007	0.959000	0.593000	0.000000	0.874	0.055	.
V23RBFT	0.005699	0.005229	1.090000	0.320500	0.456500	0.882	0.967	.
V72CRP	0.005535	0.005754	0.962000	0.000000	0.545600	0.891	0.012	*
V92NFB	0.005483	0.005717	0.959000	0.000000	0.513100	0.899	0.060	.
V71PD0V	0.005457	0.005906	0.924000	0.000000	0.530500	0.908	0.022	*
V56WH	0.004967	0.004736	1.049000	1.171900	0.765000	0.915	0.660	.
V9SFW	0.004265	0.002744	1.554000	1.472800	1.145500	0.922	0.694	.
V84YRTH	0.004108	0.007375	0.557000	0.000000	0.389600	0.928	0.151	.
V56FTC	0.003830	0.004875	0.786000	0.281200	0.220000	0.934	0.965	.
V12LK	0.003782	0.004861	0.778000	1.122800	0.910300	0.940	0.383	.
V79YTHE	0.003700	0.006623	0.559000	0.396100	0.000000	0.946	0.175	.
V101LCOR	0.003681	0.006605	0.557000	0.000000	0.370000	0.951	0.135	.
V24BFCS	0.003288	0.002264	1.452000	1.014400	1.328700	0.956	0.900	.
V95HBC	0.003249	0.004283	0.759000	0.210200	0.198800	0.961	0.030	*
V36F	0.003169	0.001979	1.601000	1.330200	1.077300	0.966	0.815	.
V87LFC	0.003127	0.005611	0.557000	0.000000	0.314400	0.971	0.616	.
V74BCHE	0.002840	0.005099	0.557000	0.000000	0.261700	0.975	0.111	.
V81SHBC	0.002627	0.004702	0.559000	0.281200	0.000000	0.979	0.995	.
V96DF	0.002392	0.004281	0.559000	0.256000	0.000000	0.983	0.455	.
V76GBB	0.002269	0.004061	0.559000	0.210200	0.000000	0.986	0.594	.
V53MB	0.002217	0.003979	0.557000	0.000000	0.210200	0.990	0.863	.

V63DWS	0.002056	0.003679	0.559000	0.220000	0.000000	0.993	0.910
V16ST	0.001950	0.001137	1.714000	1.425700	1.343300	0.996	0.650
V26WWCH	0.001348	0.001039	1.297000	1.655500	1.578000	0.998	0.983
V14AUR	0.001268	0.000601	2.111000	1.211600	1.237700	1.000	0.988
V10WBSW	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V21ESP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V27NHHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V37WHIP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V48YTBC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V49LYRE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V50CHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V51OWH	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V54STHR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V55LHE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V57PINK	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V62RBTR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V64BELL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V65LWB	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V67GGC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V68PIL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V77RRP	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V78LLOR	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V80RF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V82AZKF	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V83SFC	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V85ROSE	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V86BC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V89PC00	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V97PCL	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V100WBWS	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA
V102KING	0.000000	0.000000	NaN	0.000000	0.000000	1.000	NA

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Permutation: free

Number of permutations: 999

The SIMPER analysis shows which species contribute most to the dissimilarity between habitat groups. This helps identify indicator species or species that drive community differences.