



13-19 Ocak 2014/ ANTALYA

Kanonik Uyum Analizi (CCA)

PC-ORD Uygulaması

Canonical Correspondance Analysis

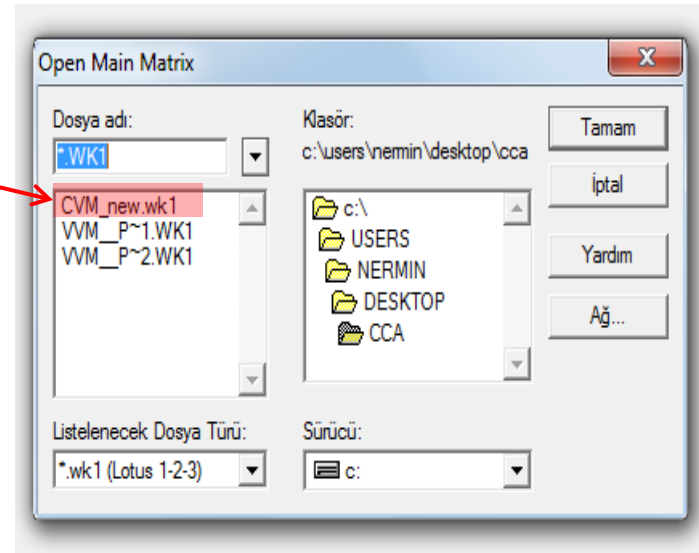
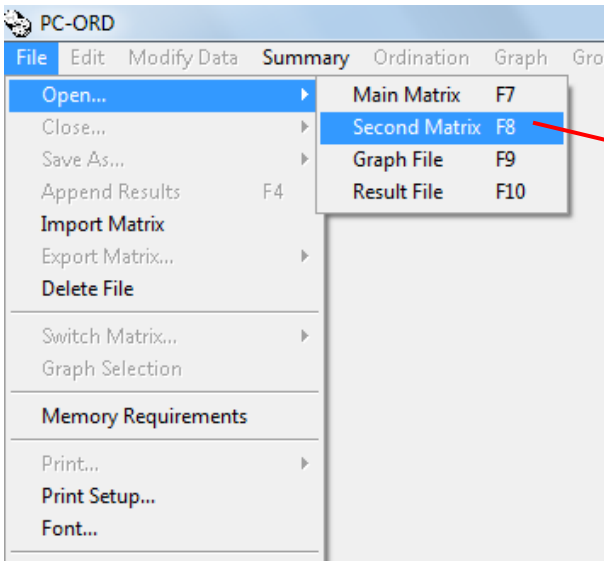
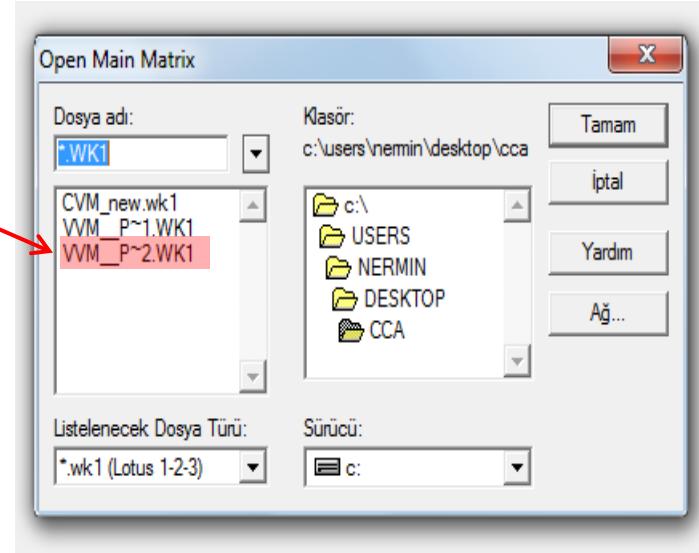
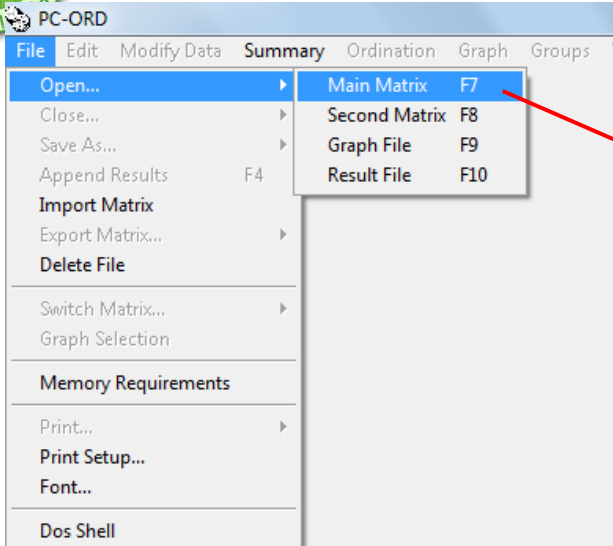
Eğitmen: Öğr.Gör. Halil SÜEL

SDÜ Sütçüler Prof.Dr.Hasan Gürbüz MYO

Ormançılık Bölümü, Isparta

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

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Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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PC-ORD

File Edit Modify Data Summary Ordination Graph Groups Window Options Help

Main - VVM_P~2.WK1

	ArbAnd	BerCra	CedLib	CelGlb	CisSal	CotNum	CotCog	Cr
80	ornek							
42	bitki							
10a	0	0	0	1	0	1	0	0
20a	0	0	0	0	0	0	0	0
30a	0	0	0	0	0	1	0	0
40a	0	0	0	0	0	0	0	0
50a	0	0	0	0	0	0	0	1
60a	0	0	0	0	0	0	0	0
70a	0	0	0	0	0	0	0	0
80a	0	0	0	0	0	0	0	0
90a	0	0	0	0	0	0	0	0

Second - CVM_NEW.WK1

	yukslt	radinx	egim	yuztas	topder	kum	toz	ki
80	ornek							
20	degisken							
oa1	1462	0.0669872	95	90	20.5	61.8608	29.6638	8.
oa2	1545	0.982962	10	60	7.1875	29.8227	34.0253	36
oa3	1485	0.0669872	80	60	32.8125	73.6378	19.7716	6.
oa4	1089	0.933012	60	30	26.48	17.6568	23.2249	56
oa5	1224	0.982962	25	60	22.04	16.1992	23.0451	60
oa6	1010	0.0669872	75	40	41.12	6.81018	14.4961	76
oa7	1030	0.982962	55	70	26.04	25.1448	14.5551	60
oa8	1028	0.982962	65	80	15.76	70.0499	12.2746	17
oa9	990	0.629409	20	20	33.12	22.7328	23.197	54

PC-ORD

File Edit Modify Data Summary Ordination Graph Groups W

Main - VVM_P~2.WK1

	ArbAnd	BerCra			
80	ornek				
42	bitki				
10a	0	0	0	1	0
20a	0	0	0	0	0

CCA Setup

Row and columns scores standardized by

Centering and normalizing

Hill's (1979) method

Scaling of ordination scores

Optimize columns: bitki

Optimize rows: ornek

Compromise

Scores for graphing

ornek scores are linear combinations of degisken

ornek scores are derived from bitki

List correlation coefficients for second matrix

Monte Carlo test

Test Null Hypothesis

No relationships between between matrices

No structure in main matrix and therefore no relationships between matrices

OK Cancel Help

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Main - VVM_P-2.WK1

	q	q	q	q	q	q	q	q
	ArbAnd	BerCra	CedLib	CelGlb	CisSal	CotNum	CotCog	Cz
10a	0	0	0	1	0	1	0	0
20a	0	0	0	0	0	0	0	0
30a	0	0	0	0	0	1	0	0
40a	0	0	0	0	0	0	0	0
50a	0	0	0	0	0	0	0	1
60a	0	0						
70a	0	0						
80a	0	0						
90a	0	0						

Second - CVM_NEW.WK1

	q	q	q	q	q	q	q	q
	yukslt	radinx	egim	yuztas	topder	kum	toz	ki
oa1	1462	0.0669872	95	90	20.5	61.8608	29.6638	8.
oa2	1545	0.982962	10	60	7.1875	29.8227	34.0253	36
oa3	1485	0.0669872	80	60	32.8125	73.6378	19.7716	6.
oa4	1089	0.933012	60	30	26.48	17.6568	23.2249	58
oa5	1224	0.982962	25	60	22.04	16.1992	23.0451	60
oa6	1010	0.0669872	75	40	41.12	6.81018	14.4961	78
oa7	1030	0.982962	55	70	26.04	25.1448	14.5551	60
oa8	1028	0.982962	65	80	15.76	70.0499	12.2746	17
oa9	990	0.629409	20	20	33.12	22.7328	23.197	54

CCA

Descriptive title for results:

OK Cancel Help

Progress

Calculating axis 1

Progress

Abort

Progress

Calculating axis 2

Progress

Abort

Progress

Calculating axis 3

Progress

Abort

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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File Edit Modify Data Summary Ordination Graph Groups Window Options Help

Main - VVM_P-2.WK1

80	ornek							
42	bitki							
	q	q	q	q	q	q	q	q
	ArbAnd	BerCra	CedLib	CelGlb	CisSal	CotNum	CotCog	Ci
1oa	0	0	0	1	0	1	0	0
2oa	0	0	0	0	0	0	0	0
3oa	0	0	0	0	0	1	0	0
4oa	0	0	0	0	0	0	0	0
5oa	0	0	0	0	0	0	0	1
6oa	0	0	0	0	0	0	0	0
7oa	0	0	0	0	0	0	0	0
8oa	0	0	0	0	0	0	0	0
9oa	0	0	0	0	0	0	0	0

Graph - GRAPHROW.FIL

80			
1oa	-.69735	-.68968	-.27031
2oa	.39017	-.14184	.50255
3oa	-1.57490	-.05231	-.75369
4oa	-.19717	1.30570	.36862
5oa	-.09777	1.21162	.27557
6oa	-.54485	2.97950	-.12585
7oa	-.36735	2.10754	-.62882
8oa	-.27441	-1.25983	-.19874
9oa	.15629	.98392	.22061
10oa	-.17646	1.45680	-.01693
11oa	-.27677	-1.19046	-.02928
12oa	-.25201	.43060	.36457
13oa	-.09851	-.23131	.37201
14oa	-.17921	-.52497	-.46489
15oa	.03689	-.45934	-.04633
16oa	.05104	.14265	.55930
17oa	-.63136	-.96353	.42455

Second - CVM_NEW.WK1

80	ornek							
20	degisken							
	q	q	q	q	q	q	q	q
	yukslt	radinx	egim	yuztas	topder	kum	toz	ki
oa1	1462	0.0669872	95	90	20.5	61.8608	29.6638	8.
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oa9	990	0.629409	20	20	33.12	22.7328	23.197	54

Result - RESULT.FIL

***** Canonical Correspondence Analysis *****

PC-ORD, Version 3.17
9 Jan 2014, 15:15

DATA MATRICES

Main matrix:
80 ornek (rows)
42 bitki (columns)

Second matrix:
80 ornek (rows)
20 degisken (columns)

Finished reading data.

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```
PC-ORD - [Result - ]
File Edit Modify Data Summary Ordination Graph Groups Window Options Help
Residual = .73E-01 at iteration 990
Solution did not reach tolerance after 999 iterations.
.100000E-12 = tolerance
.746490E-01 = difference from previous iteration
-----

AXIS SUMMARY STATISTICS
Number of canonical axes: 3
Total variance ("inertia") in the species data: 3.897
-----

                Axis 1   Axis 2   Axis 3
-----
Eigenvalue                .201   .554   .197
Variance in species data
  % of variance explained   5.2   14.2   5.0
  Cumulative % explained   5.2   19.4   24.4
Pearson Correlation, Spp-Envt*   .520   .395   .517
Kendall (Rank) Corr., Spp-Envt   .255   .301   .350
-----

* Correlation between sample scores for an axis derived from the species
  data and the sample scores that are linear combinations of the
```

Main:VVM_P~2.WK1 Second:CVM_NEW.WK1 Graph:GRAPHROW.FIL Result: F4 Append Results

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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PC-ORD

File Edit Modify Data Summary Ordination **Graph** Groups Window Options Help

Main - VVM_P~2.WK1 **Graph Ordination**

	ArbAnd	BerCra	CedLib	CelGlb	CisSal	CotNum	CotCog	Cz
10a	0	0	0	1	0	1	0	0
20a	0	0	0	0	0	0	0	0
30a	0	0	0	0	0	1	0	0
40a	0	0	0	0	0	0	0	0
50a	0	0	0	0	0	0	0	1
60a	0	0	0	0	0	0	0	0
70a	0	0	0	0	0	0	0	0
80a	0	0	0	0	0	0	0	0
90a	0	0	0	0	0	0	0	0

Graph - GRAPHROW.FIL

	10a	20a	30a
10a	-.69735	-.68968	-.27031
20a	.39017	-.14184	.50255
30a	-1.57490	-.05231	-.75369
40a	-.19717	1.30570	.36862
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110a	-.27677	-1.19046	-.02928
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Result -

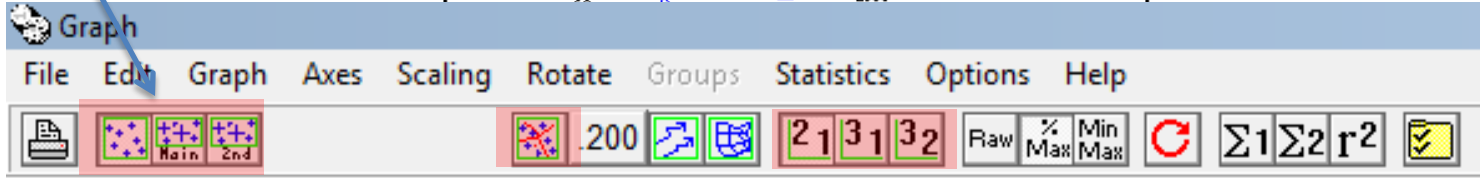
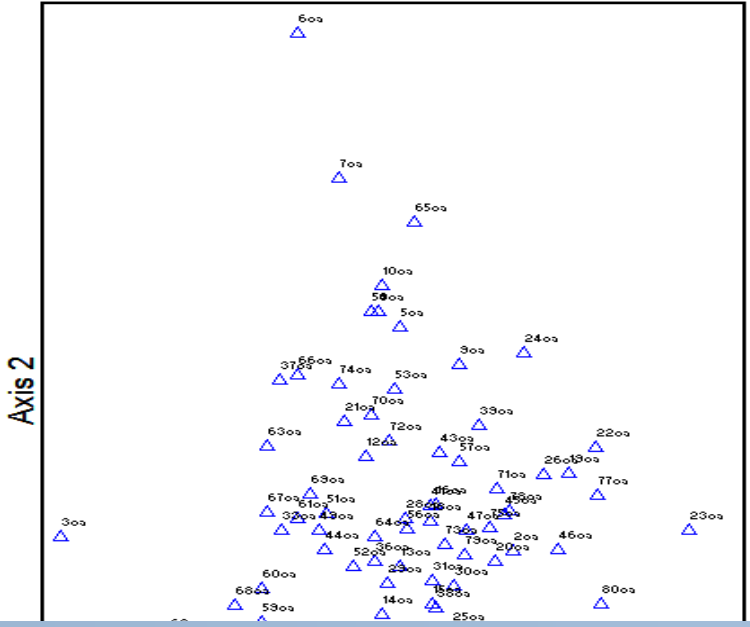
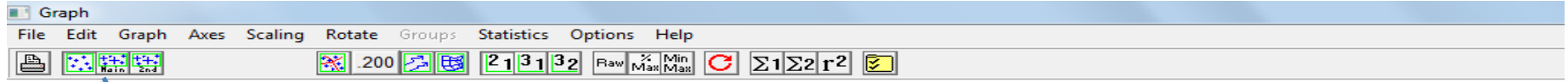
Residual = .73E-01 at iteration 990
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	Axis 1	Axis 2	Axis 3
Eigenvalue	.201	.554	.197
Variance in species data			
% of variance explained	5.2	14.2	5.0
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Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

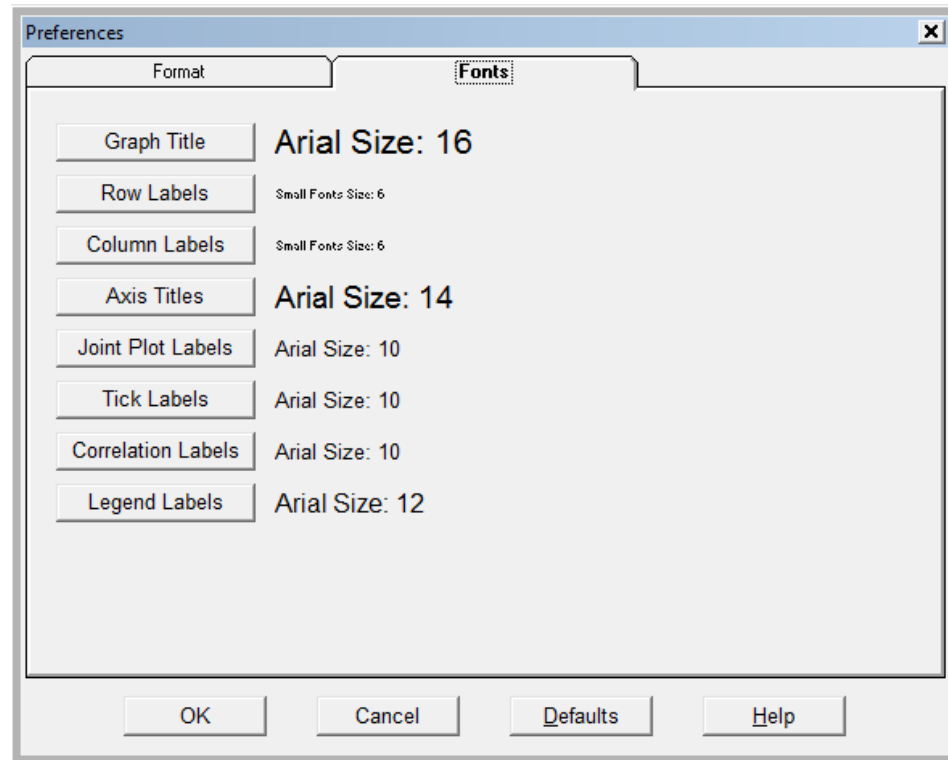
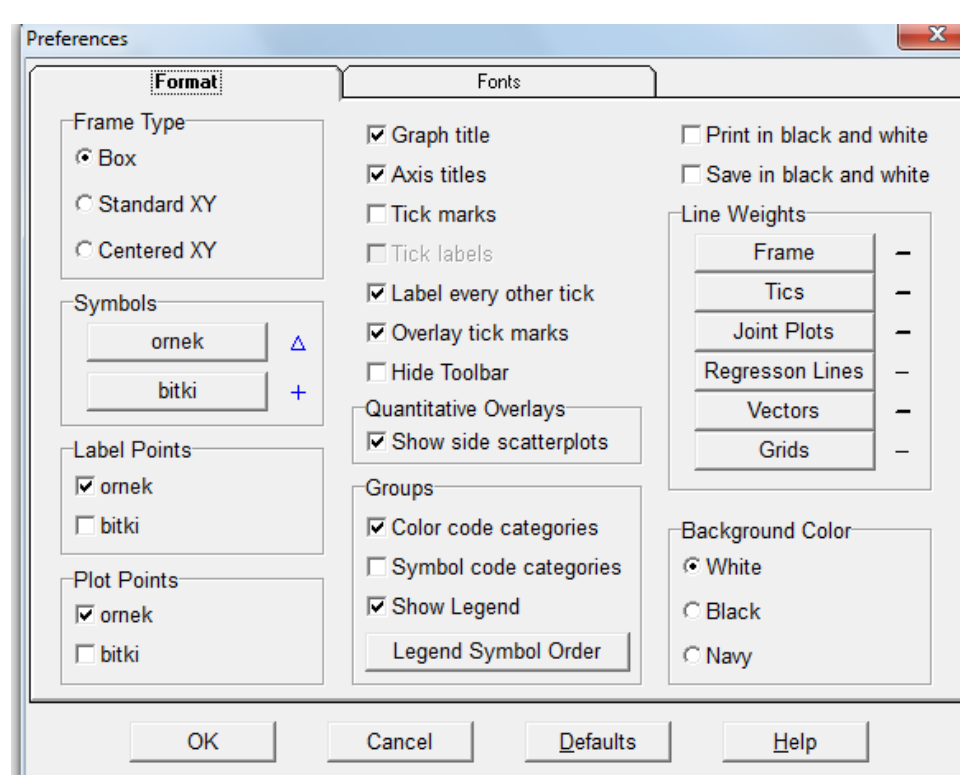
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Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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Axis:	1								
	r	r-sq	tau	r					tau
ArbAnd	.491	.241	.406	-.083	.007	-.050	-.174	.030	-.148
BerCra	-.302	.091	-.263	-.286	.082	-.229	.058	.003	.080
CedLib	-.277	.077	-.232	-.234	.055	-.196	-.062	.004	-.041
CelGlb	-.002	.000	.005	-.066	.004	-.058	-.031	.001	-.030
CisSal	.388	.151	.315	-.023	.001	.018	-.108	.012	-.100
CotNum	-.281	.079	-.213	-.060	.004	-.031	.082	.007	.099
CotCog	.495	.245	.388	-.077	.006	-.043	-.107	.011	-.082
CraOri	-.140	.020	-.113	.052	.003	.085	-.125	.016	-.115
CraMon	.318	.101	.243	-.025	.001	-.026	-.019	.000	.025
DapOle	-.097	.009	-.082	.011	.000	.008	.102	.010	.106
DapSer	.217	.047	.153	-.146	.021	-.049	.148	.022	.132
FonPhl	.187	.035	.149	.265	.070	.209	-.132	.017	-.092
FrXOrn	-.032	.001	-.034	.124	.015	.052	-.036	.001	-.045
JasFru	-.099	.010	-.100	-.013	.000	.005	.043	.002	.029
JunCom	-.319	.102	-.301	-.127	.016	-.114	.269	.072	.182
JunExc	-.135	.018	-.122	-.268	.072	-.204	.283	.080	.235
JunFoe	-.019	.000	-.017	-.113	.013	-.076	.264	.070	.221
JunOxy	.252	.064	.220	-.016	.000	.015	-.022	.000	-.037
MryCom	.411	.169	.344	.041	.002	.075	-.191	.036	-.157
NerOle	.407	.166	.341	-.019	.000	.034	-.164	.027	-.120
OleOle	.350	.122	.255	-.013	.000	.011	-.205	.042	-.139
PalSpi	.311	.097	.272	.159	.025	.145	-.117	.014	-.074
PhlArm	-.303	.092	-.282	-.056	.003	-.047	-.061	.004	-.032
PhlGra	.183	.034	.164	.190	.036	.176	-.335	.112	-.263
PhyLat	.424	.180	.348	.018	.000	.039	-.209	.044	-.173
PinBru	.508	.258	.408	-.020	.000	.036	-.216	.047	-.179
PinNig	-.224	.050	-.170	.153	.023	.071	-.054	.003	-.028
PisTer	.374	.140	.320	.019	.000	.057	-.215	.046	-.184
PlaOri	.349	.122	.249	.136	.018	.135	-.048	.002	-.028
PruDiv	-.168	.028	-.146	-.037	.001	.012	.028	.001	.054
QueCer	.138	.019	.105	-.053	.003	-.013	-.310	.096	-.231
QueCoc	.204	.042	.154	.092	.009	.089	-.182	.033	-.124
QueIlx	.141	.020	.137	-.063	.004	-.054	.085	.007	.067
QueInf	.083	.007	.074	-.076	.006	-.030	-.161	.026	-.115
QueIth	.285	.081	.201	-.037	.001	-.001	.039	.002	.034
RhaOle	-.097	.009	-.073	-.220	.048	-.208	.245	.060	.175
RhaRho	-.011	.000	-.010	-.104	.011	-.076	.020	.000	.004
RosCan	-.032	.001	-.042	-.068	.005	-.015	.173	.030	.156

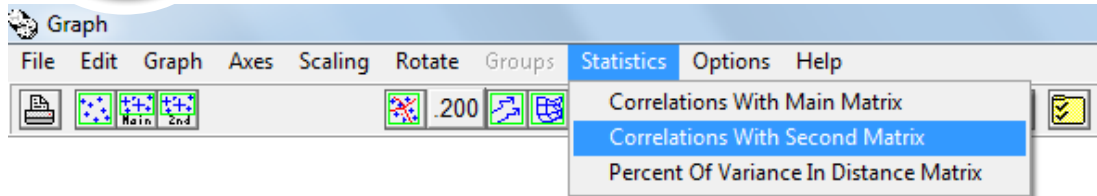
Pearson and Kendall Correlations with Ordination Axes N= 80

Axis:	1	2	3						
	r	r-sq	tau	r	r-sq	tau	r	r-sq	tau

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***** Output from Graph *****

PC-ORD Version 3.17

09.01.2014, 16:51

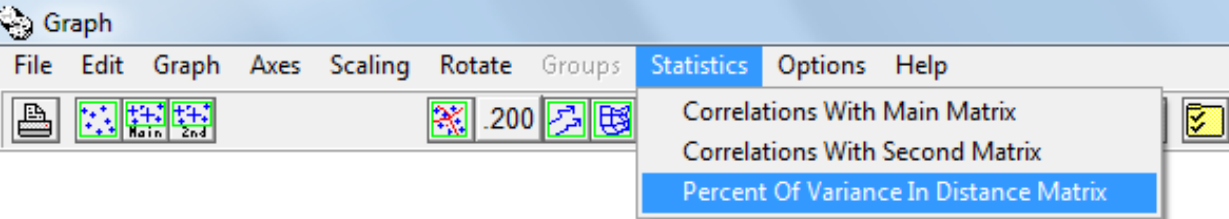
Pearson and Kendall Correlations with Ordination Axes N= 80

Axis:	1			2			3		
	r	r-sq	tau	r	r-sq	tau	r	r-sq	tau
yukslt	-.635	.403	-.458	-.150	.023	-.116	.249	.062	.161
radinx	.128	.016	.097	-.033	.001	-.050	-.035	.001	-.018
egim	-.273	.075	-.190	.132	.018	.087	-.023	.001	.010
yuztas	-.448	.200	-.341	-.051	.003	-.065	.238	.057	.158
topder	.480	.230	.264	-.036	.001	.051	-.129	.017	-.098
kum	-.439	.193	-.269	-.787	.619	-.628	-.409	.167	-.285
toz	.308	.095	.178	-.050	.002	.004	.558	.311	.435
kil	.365	.134	.235	.867	.752	.693	.244	.060	.179
pH	.062	.004	.032	-.119	.014	-.070	.061	.004	.058
kirec	.119	.014	.137	-.109	.012	-.007	-.218	.048	-.088
orgmad	-.364	.132	-.116	-.194	.038	-.114	-.011	.000	.069
zyyprz	-.214	.046	-.187	-.059	.003	-.034	.299	.089	.223
krctas	-.494	.244	-.397	-.143	.020	-.094	.096	.009	.072
konglo	.269	.072	.206	-.129	.017	-.116	-.149	.022	-.107
karsk	.327	.107	.271	.255	.065	.192	.011	.000	.005
disbky	-.030	.001	-.021	-.229	.052	-.204	.119	.014	.114
duzarz	-.377	.142	-.285	.057	.003	.064	.254	.064	.183
ondule	.446	.199	.353	-.163	.027	-.052	.072	.005	.042
icbuky	-.051	.003	-.060	.399	.160	.218	-.562	.316	-.425
yamkon	.210	.044	.145	.249	.062	.188	-.173	.030	-.104

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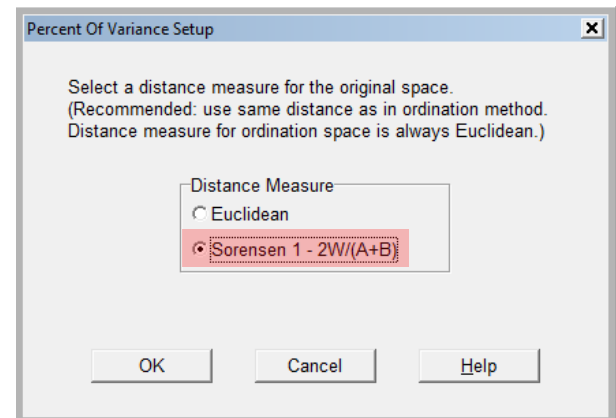
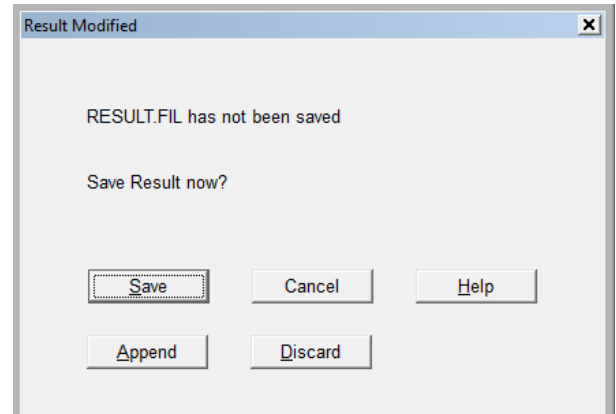
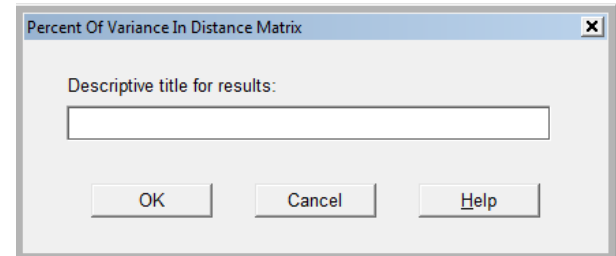
***** Output from Graph *****

PC-ORD Version 3.17
09.01.2014, 16:54

Coefficients of determination for the correlations between ordination distances and distances in the original n-dimensional space:

Axis	R Squared	
	Increment	Cumulative
1	.069	.069
2	-.040	.028
3	.005	.033

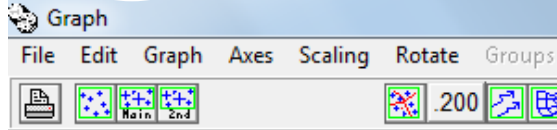
Number of entities = 80
Number of entity pairs used in correlation = 3160
Distance measure for ORIGINAL distance: Sorensen 1 - 2W/(A+B)



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***** Output from
PC-ORD Version 3.17
09.01.2014, 16:51

Pearson and Kendall Correlations with C

Axis:

	1			
	r	r-sq	tau	r
yukslt	-.635	.403	-.458	-.150
radinx	.128	.016	.097	-.033
egim	-.273	.075	-.193	.132
yuztas	-.448	.200	-.341	-.051
topder	.480	.230	.264	-.036
kum	-.439	.193	-.269	-.787
toz	.308	.095	.178	-.050
kil	.365	.134	.235	.867
pH	.062	.004	.032	-.119
kirec	.119	.014	.137	-.109
orgmad	-.364	.132	-.116	-.194
yzypz	-.214	.046	-.187	-.059
krctas	-.494	.244	-.397	-.143
konglo	.269	.072	.206	-.129
karsk	.327	.107	.271	.255
disbky	-.030	.001	-.021	-.229
duzarz	-.377	.142	-.285	.057
ondule	.446	.199	.353	-.163
icbuky	-.051	.003	-.060	.399
yamkon	.210	.044	.145	.249

	A	B	C	D	E	F	G
1		eksen1	eksen2	eksen3	yukslt	radinx	egim
2	oa1	-0.69735	-0.68968	-0.27031	1462	0.066987	95
3	oa2	0.39017	-0.14184	0.50255	1545	0.982963	10
4	oa3	-1.5749	-0.05231	-0.75369	1485	0.066987	80
5	oa4	-0.19717	1.3057	0.36862	1089	0.933013	60
6	oa5	-0.09777	1.21162	0.27557	1224	0.982963	25
7	oa6	-0.54485	2.9795	-0.12585	1010	0.066987	75
8	oa7	-0.36735	2.10754	-0.62882	1030	0.982963	55
9	oa8	-0.27441	-1.25983	-0.19874	1028	0.982963	65
10	oa9	0.15629	0.98392	0.22061	990	0.62941	20
11	oa10	-0.17646	1.4568	-0.01693	950	0.25	55
12	oa11	-0.27677	-1.21974	-0.02928	1350	0.066987	90
13	oa12	-0.25201	0.4306	0.36457	1365	0.066987	60
14	oa13	-0.09851	-0.23131	0.37201	1440	0.37059	60
15	oa14	-0.17921	-0.52497	-0.46489	1160	0.37059	45
16	oa15	0.03689	-0.45934	-0.04633	1122	0.982963	20
17	oa16	0.05104	0.14265	0.5593	1170	0.62941	30
18	oa17	-0.63136	-0.96353	0.42455	1457	0.25	10
19	oa18	0.03294	0.03974	-0.45196	1007	0.37059	45
20	oa19	0.63249	0.32891	0.58668	1140	0.37059	60
21	oa20	0.31264	-0.20351	0.20155	1056	0.982963	20
22	oa21	-0.34608	0.63555	0.00367	895	0.066987	50
23	oa22	0.74607	0.48351	0.53376	874	0.37059	25
24	oa23	1.15167	-0.01295	0.3142	407	0.37059	40
25	oa24	0.44043	1.05214	-0.62427	514	0.37059	13
26	oa25	0.12558	-0.62364	0.28371	618	0.25	10

	V1	Eksen1
1	oa1	-.36253
2	oa2	.64456
3	oa3	-.29608
4	oa4	-.30472
5	oa5	-.23840
6	oa6	-.66719
7	oa7	-.15703
8	oa8	-.35757
9	oa9	.00408
10	oa10	-.22493
11	oa11	.36403
12	oa12	.04275
13	oa13	.24028
14	oa14	-.23586
15	oa15	.51408
16	oa16	.29944
17	oa17	1.09410
18	oa18	-.29302
19	oa19	-.50809
20	oa20	.37638
21	oa21	-.41914
22	oa22	-.63401
23	oa23	-.56787
24	oa24	-.36060
25	oa25	-.66601
26	oa26	-.60897
27	oa27	-.58979
28	oa28	-.83460
29	oa29	-.37970

		eksen1	eksen2	eksen3	yukslt	radinx	egim
Eksen1	Pearson Correlation	1	.017	.079	-.635	.128	-.273
	Sig. (2-tailed)		.884	.487	.000	.257	.014
	N	80	80	80	80	80	80
eksen2	Pearson Correlation	.017	1	-.070	-.150	-.032	.131
	Sig. (2-tailed)	.884	.538	.183	.775	.246	.246
	N	80	80	80	80	80	80
eksen3	Pearson Correlation	.079	-.070	1	.249	-.035	-.023
	Sig. (2-tailed)	.487	.538	.026	.757	.837	.837

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help



yükslt



.200



21 31 32

Raw

% Max

Min Max



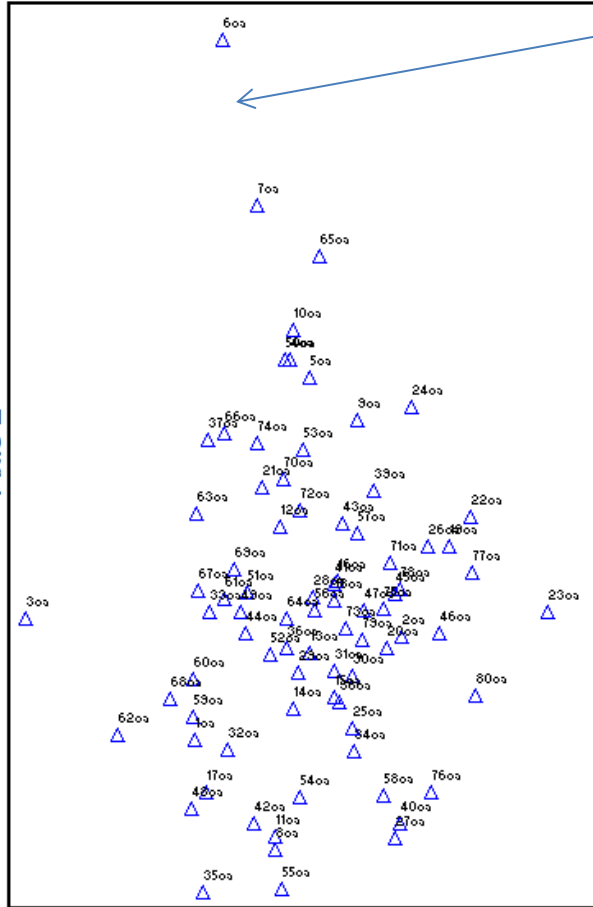
$\Sigma 1$

$\Sigma 2$

r^2



Axis 2



Axis 1

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

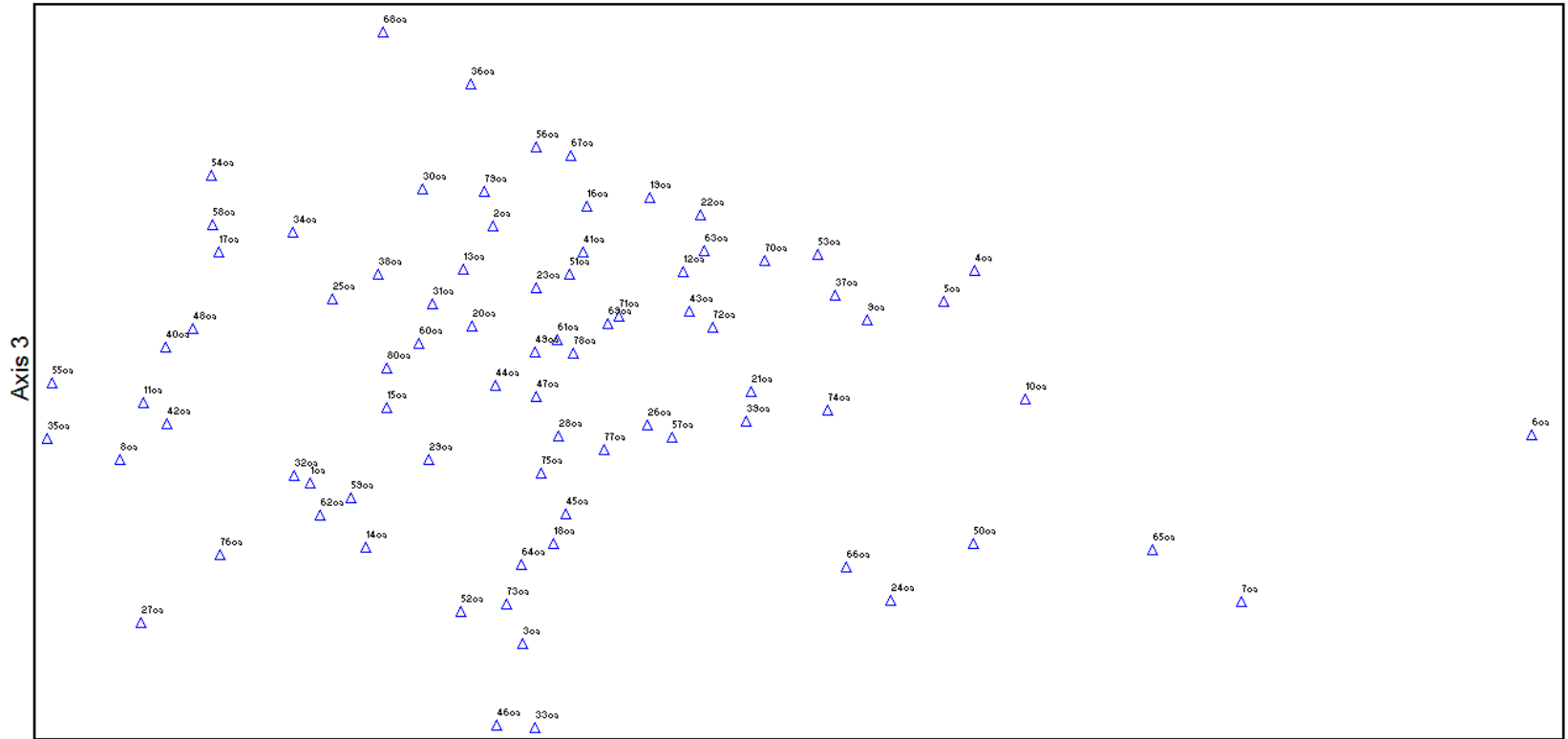
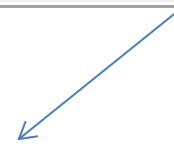


13-19 Ocak 2014/ ANTALYA

Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

Graph toolbar icons: Print, Main, 2nd, **yukslt**, Zoom In, Zoom Out, Scatter Plot, .200, Rotate, 3D, **2 1 3 1 3 2**, Raw, % Max, Min Max, Refresh, $\Sigma 1$ $\Sigma 2$ r^2 , Checkmark.



Axis 2

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

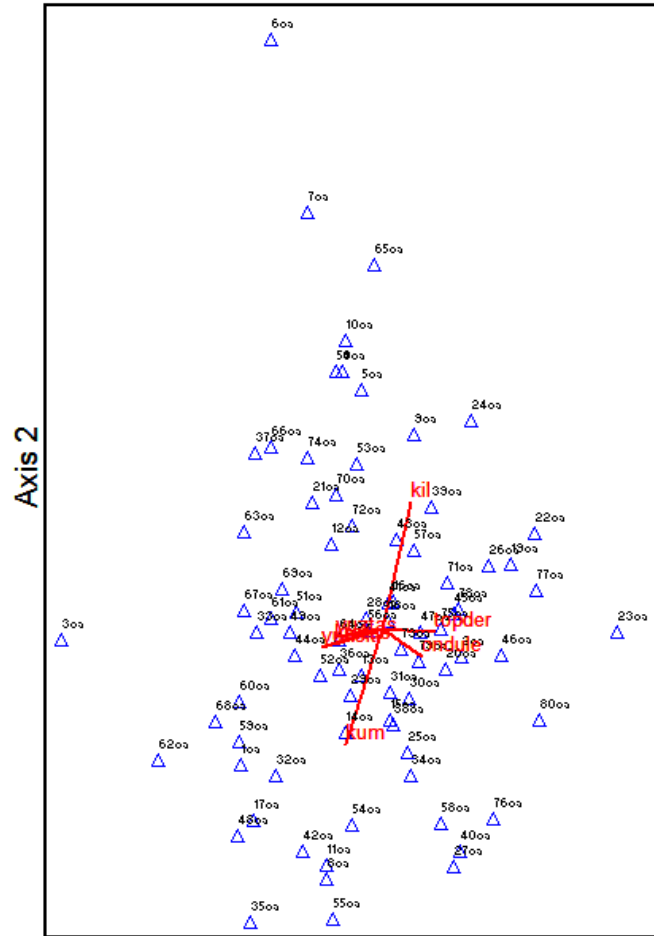


13-19 Ocak 2014/ ANTALYA

Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

Graph toolbar with icons for file operations, data selection, and statistical functions. The word "yukslt" is visible in the toolbar. The "Statistics" section shows values 21, 31, and 32. Other icons include "Raw", "% Max", "Min Max", a refresh button, and summation symbols $\Sigma 1$, $\Sigma 2$, and r^2 .



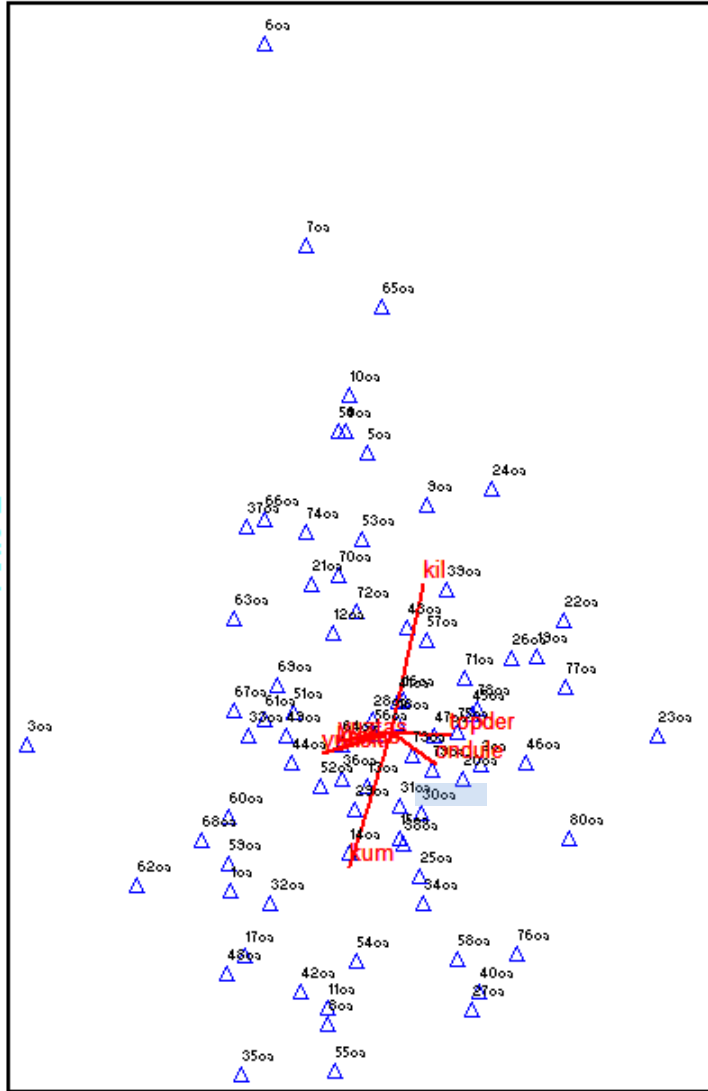
Axis 1

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

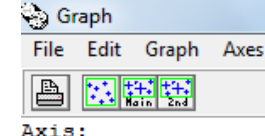
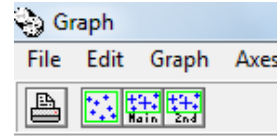


13-19 Ocak 2014/ ANTALYA

Axis 2



Axis 1



Axis:

r

PC-ORD Version 3.17
09.01.2014, 16:51

ArbAnd .491
BerCra **-.302**
CedLib **-.277**
CelGlb **-.002**
CisSal .388
CotNum **-.281**
CotCog **.495**

Pearson and Kendall

CraOri **-.140**
CraMon .318
DapOle **-.097**
DapSer .217
FonPhl .187

Axis:

r

yukslt **-.635**
radinx .128
egim **-.273**
yuztas **-.448**
topder **.480**
kum **-.439**
toz .308
kil **.365**
pH .062
kirec .119
orgmad **-.364**
yzyprz **-.214**
krcrtas **-.494**
konglo .269
karsk .327
disbky **-.030**
duzarz **-.377**
ondule **.446**
icbuky **-.051**
yamkon .210

FrxOrn **-.032**
JasFru **-.099**
JunCom **-.319**
JunExc **-.135**
JunFoe **-.019**
JunOxy .252
MryCom .411
NerOle .407
OleOle .350
PalSpi .311
PhlArm **-.303**
PhlGra .183
PhyLat .424
PinBru **.508**
PinNig **-.224**
PisTer .374
PlaOri .349
PruDiv **-.168**
QueCer .138
QueCoc .204
QueIlx .141
QueInf .083
QueTeb .085

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

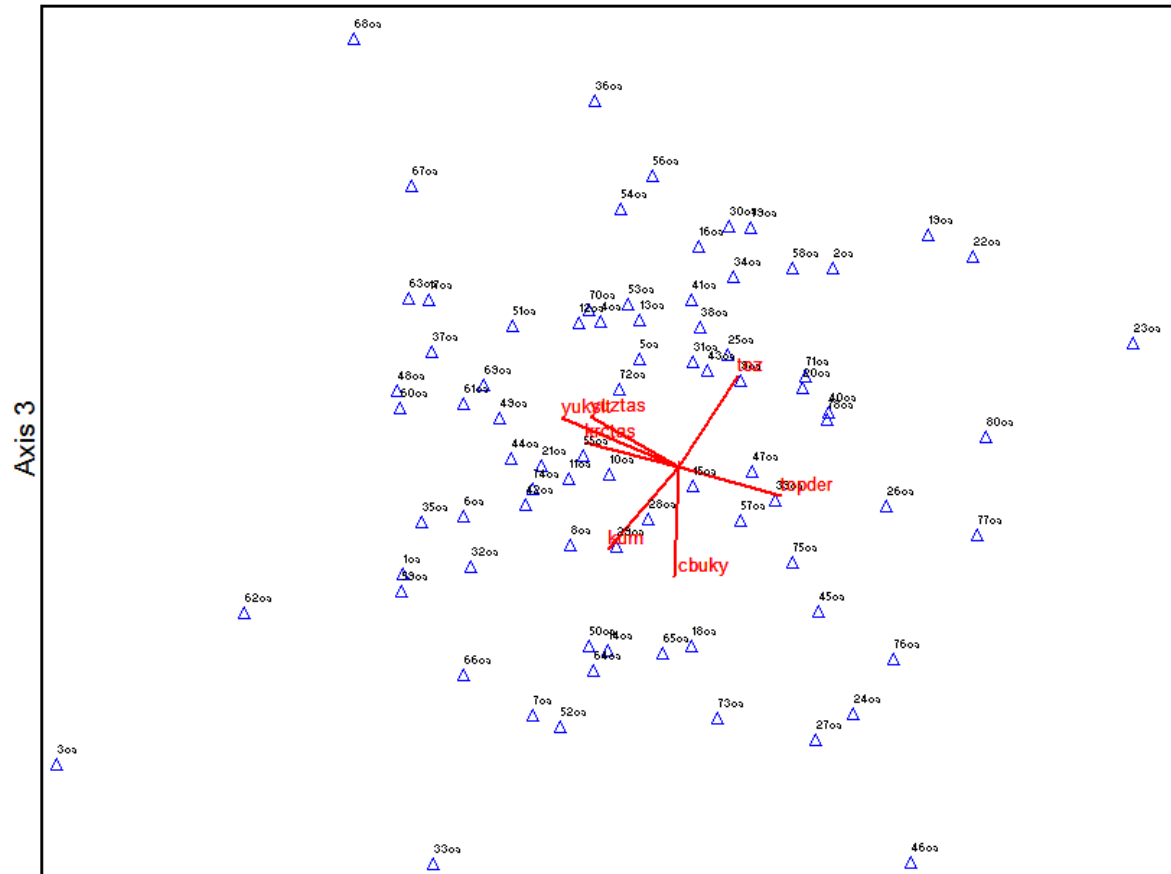


13-19 Ocak 2014/ ANTALYA

Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

Graph toolbar with icons for file operations, data selection, and statistical functions. The 'Statistics' section shows 'yukslt' selected, with a value of 200. The 'Options' section shows 'Raw', '% Max', and 'Min Max' options. The 'Statistics' section also shows 'Σ1', 'Σ2', and 'r²' options.



Axis 1

Axis 3

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

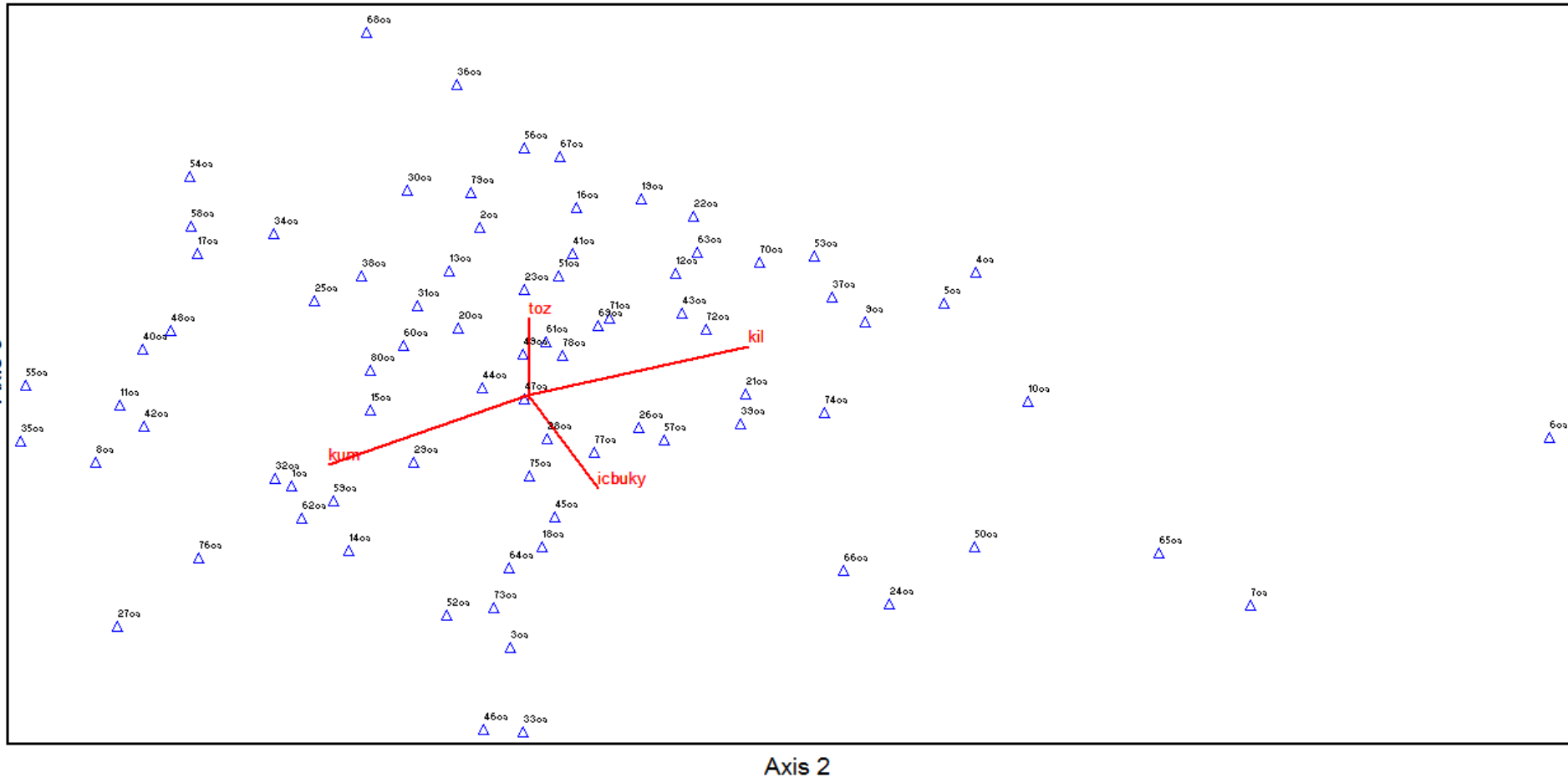


13-19 Ocak 2014/ ANTALYA

Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

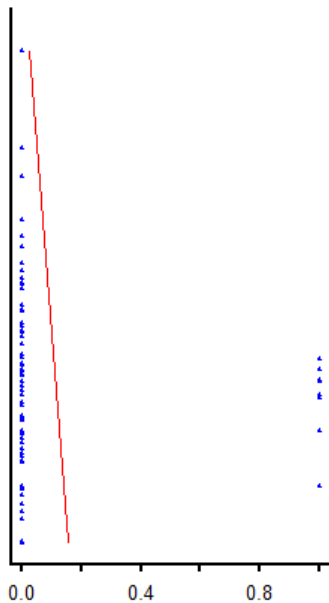
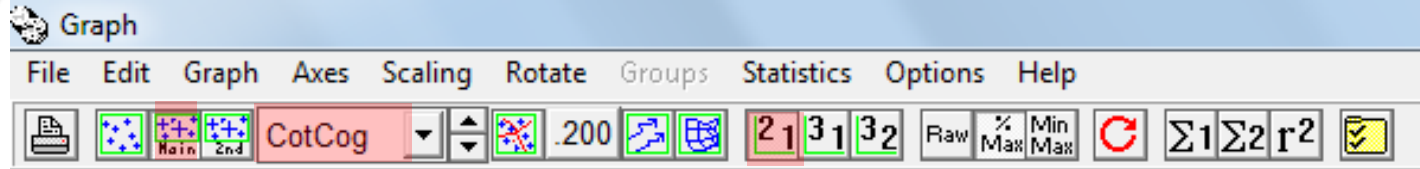
Graph toolbar with icons for file operations, zooming, and data manipulation. The text 'yukslt' is visible in the toolbar area. The zoom level is set to 200. The toolbar also includes buttons for 'Raw', '% Max', 'Min Max', and statistical functions like $\Sigma 1$, $\Sigma 2$, and r^2 .



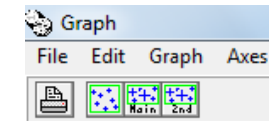
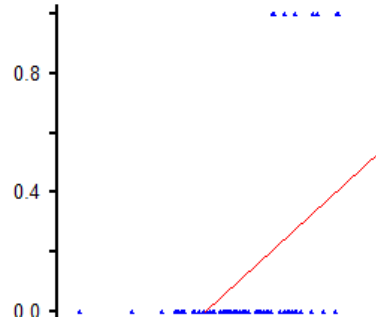
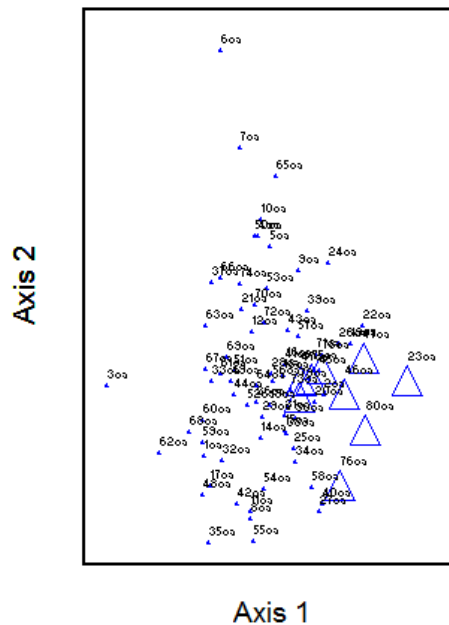
Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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CotCog
Axis 1
 $r = .495$ $\tau = .388$
Axis 2
 $r = -.077$ $\tau = -.043$



Axis:

	r
ArbAnd	.491
BerCra	-.302
CedLib	-.277
CelGlb	-.002
CisSal	.388
CotNum	-.281
CotCog	.495
CraOri	-.140
CraMon	.318
DapOle	-.097
DapSer	.217
FonPhl	.187
FrXOrn	-.032
JasFru	-.099
JunCom	-.319
JunExc	-.135
JunFoe	-.019
JunOxy	.252
MryCom	.411
NerOle	.407
OleOle	.350
PalSpi	.311
PhlArm	-.303
PhlGra	.183
PhyLat	.424
PinBru	.508
PinNig	-.224
PisTer	.374
PlaOri	.349

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

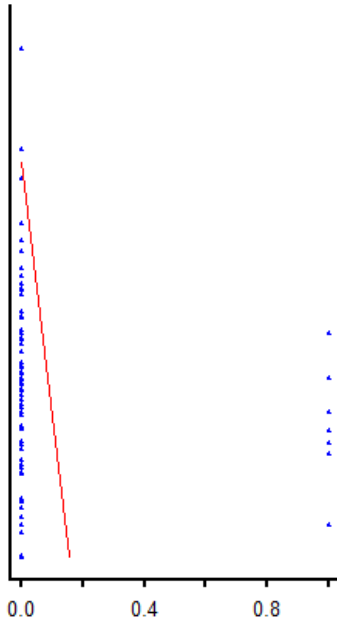


13-19 Ocak 2014/ ANTALYA

Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

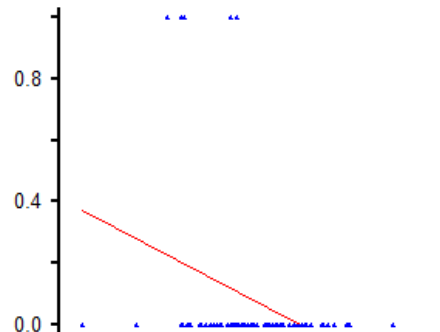
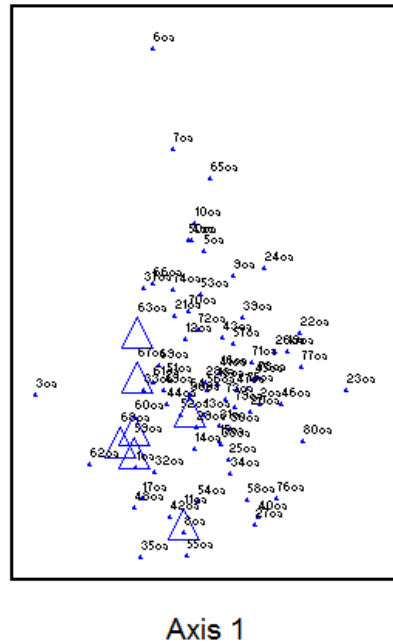
JunCom 200 2 1 3 1 3 2 Raw % Max Min Max $\Sigma 1 \Sigma 2 r^2$



JunCom

Axis 1
 $r = -.319$ $\tau = -.301$

Axis 2
 $r = -.127$ $\tau = -.114$



Graph

File Edit Graph Axes

Main End

Axis:

	r
ArbAnd	.491
BerCra	-.302
CedLib	-.277
CelGlb	-.002
CisSal	.388
CotNum	-.281
CotCog	.495
CraOri	-.140
CraMon	.318
DapOle	-.097
DapSer	.217
FonPhl	.187
FrXOrn	-.032
JasFru	-.099
JunCom	-.319
JunExc	-.135
JunFoe	-.019
JunOxy	.252
MryCom	.411
NerOle	.407
OleOle	.350
PalSpi	.311
PhlArm	-.303
PhlGra	.183
PhyLat	.424
PinBru	.508
PinNig	-.224
PisTer	.374
PlaOri	.349

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

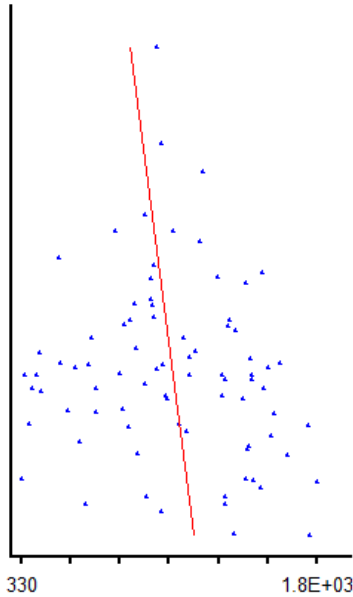


13-19 Ocak 2014/ ANTALYA

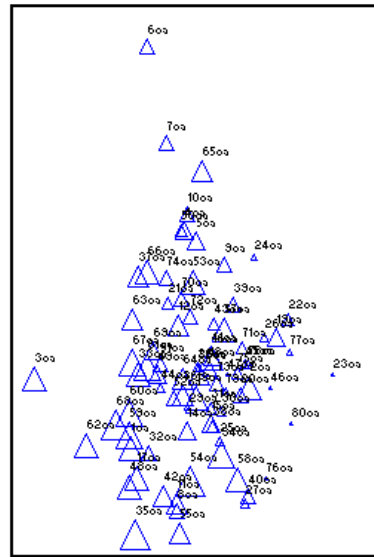
Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

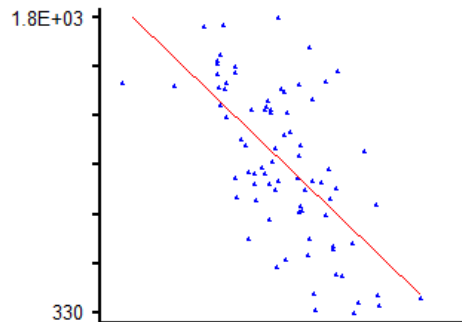
Graph toolbar with icons for file operations, zooming, and statistics. The 'yukse' variable is selected, and the '21' variable is highlighted in the statistics panel.



yukse
Axis 1
 $r = -.635$ $\tau = -.458$
Axis 2
 $r = -.150$ $\tau = -.116$



Axis 1



Pearson and Kendall

Axis:

r

yukse	-.635
radinx	.128
egim	-.273
yuztas	-.448
topder	.480
kum	-.439
toz	.308
kil	.365
pH	.062
kirec	.119
orgmad	-.364
zyyprz	-.214
krctas	-.494
konglo	.269
karsk	.327
disbky	-.030
duzarz	-.377

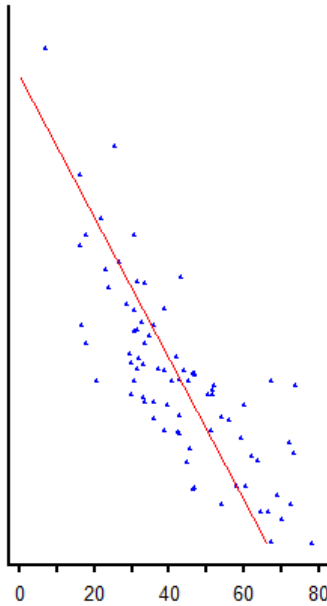
Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



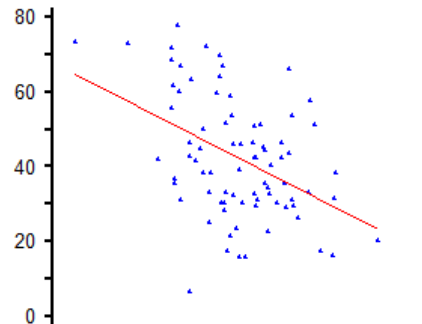
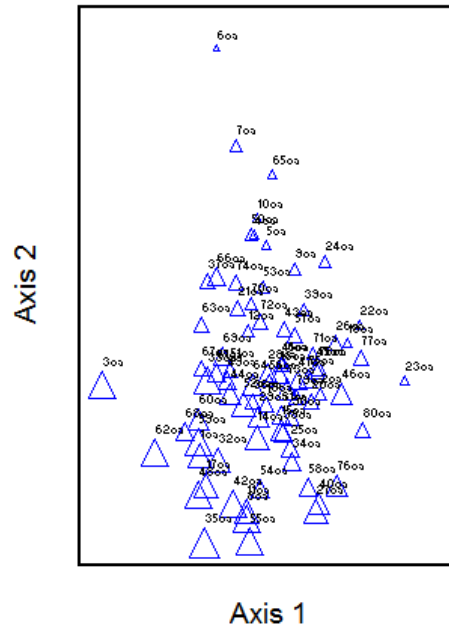
13-19 Ocak 2014/ ANTALYA

Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help



kum
Axis 1
 $r = -.439$ $\tau = -.269$
Axis 2
 $r = -.787$ $\tau = -.628$



Pearson and Kendall

Axis:

r

yukslt	-.635
radinx	.128
egim	-.273
yuztas	-.448
topder	.480
kum	-.439
toz	.308
kil	.365
pH	.062
kirec	.119
orgmad	-.364
zyyprz	-.214
krctas	-.494
konglo	.269
karsk	.327
disbky	-.030
duzarz	-.377

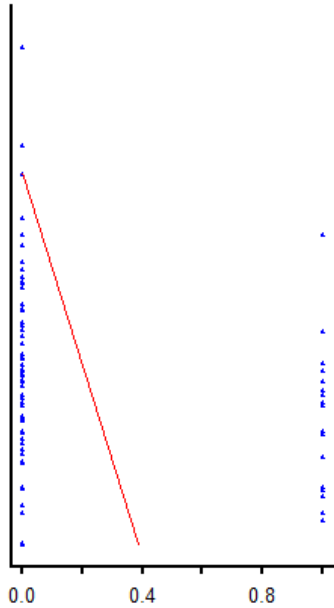
Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler

13-19 Ocak 2014/ ANTALYA

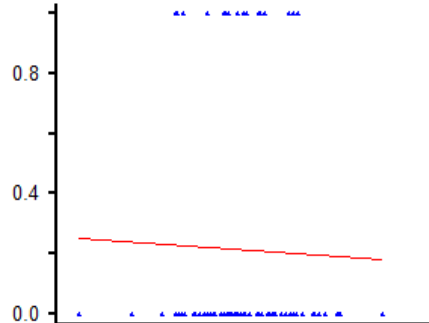
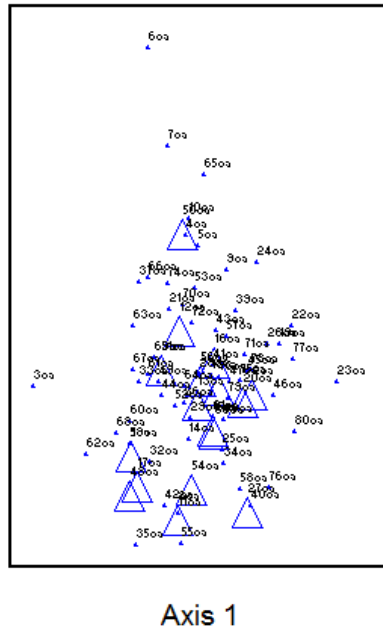
Graph

File Edit Graph Axes Scaling Rotate Groups Statistics Options Help

disbky 200 21 31 32 Raw % Max Min Max $\Sigma 1$ $\Sigma 2$ r^2



disbky
Axis 1
 $r = -.030$ $\tau = -.021$
Axis 2
 $r = -.229$ $\tau = -.204$



Pearson and Kendall

Axis:

r

yukslt	-.635
radinx	.128
egim	-.273
yuztas	-.448
topder	.480
kum	-.439
toz	.308
kil	.365
pH	.062
kirec	.119
orgmad	-.364
zyyprz	-.214
krctas	-.494
konglo	.269
karsk	.327
disbky	-.030
duzarz	-.377
ondule	.446
icbuky	-.051
yamkon	.210

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



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İlk işlemlerin ardından Cluster, Twinspan Birliktelik gruplarını doğrudan çağırırız...

PC-ORD

File Edit Modify Data Summary Ordination Graph Groups Window Options Help

Main - VVM_P~2.WK1

80	ornek							
42	bitki							
	q	q	q	q	q	q	q	q
	ArbAnd	BerCra	CedLib	CelGlb	CisSal	CotNum	CotCog	Cz
1oa	0	0	0	1	0			
2oa	0	0	0	0	0			
3oa	0	0	0	0	0			
4oa	0	0	0	0	0			
5oa	0	0	0	0	0			
6oa	0	0	0	0	0			
7oa	0	0	0	0	0			
8oa	0	0	0	0	0			
9oa	0	0	0	0	0			

Graph - GRAPHROW.FIL

80			
1oa	-.69735	-.68968	-.27031
2oa	.39017	-.14184	.50255
3oa	-1.57490	-.05231	-.75369
4oa	-.19717	1.30570	.36862

Open Second Matrix

Dosya adı: *.WK1

Klasör: c:\...desktop\grupan~1

CLUSTE~1.WK1
CLUSTE~2.WK1
PC_ORD~1.WK1
PC_ORD~2.WK1
PC_ORD~3.WK1
PC_ORD~4.WK1
TWINSP~1.WK1
TWINSP~2.WK1

Listelenecek Dosya Türü: *.wk1 (Lotus 1-2-3)

Sürücü: c:

Tamam
iptal
Yardım
Ağ...

Second matrix:
80 ornek (rows)
20 degisken (columns)

Finished reading data.

Main:VVM P-2.WK1 Second:CVM_NEW.WK1 Graph:GRAPHROW.FIL Result: F4 Append Results

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



13-19 Ocak 2014/ ANTALYA

PC-ORD

File Edit Modify Data Summary Ordination **Graph** Groups Window Options Help

Main - VVM_P-2.WK1 **Graph Ordination**

	ArbAnd	BerCra	CedLib	CelGlb	CisSal	CotNum	CotCog	Cz
10a	0	0	0	1	0	1	0	0
20a	0	0	0	0	0	0	0	0
30a	0	0	0	0	0	1	0	0
40a	0	0	0	0	0	0	0	0
50a	0	0	0	0	0	0	0	1
60a	0	0	0	0	0	0	0	0
70a	0	0	0	0	0	0	0	0
80a	0	0	0	0	0	0	0	0
90a	0	0	0	0	0	0	0	0

Graph - GRAPHROW.FIL

10a	-.69735	-.68968	-.27031
20a	.39017	-.14184	.50255
30a	-1.57490	-.05231	-.75369
40a	-.19717	1.30570	.36862
50a	-.09777	1.21162	.27557
60a	-.54485	2.97950	-.12585
70a	-.36735	2.10754	-.62882
80a	-.27441	-1.25983	-.19874
90a	.15629	.98392	.22061
100a	-.17646	1.45680	-.01693
110a	-.27677	-1.19046	-.02928
120a	-.25201	.43060	.36457
130a	-.09851	-.23131	.37201
140a	-.17921	-.52497	-.46489
150a	.03689	-.45934	-.04633
160a	.05104	.14265	.55930
170a	-.63136	-.96353	.42455

Second - CLUSTE~1.WK1

	Cluster_
oa1	1
oa2	2
oa3	1
oa4	3
oa5	3
oa6	3
oa7	3
oa8	3
oa9	3
oa10	3

Result - RESULT.FIL

```
***** Canonical Correspondence Analysis *****
PC-ORD, Version 3.17
9 Jan 2014, 21:33

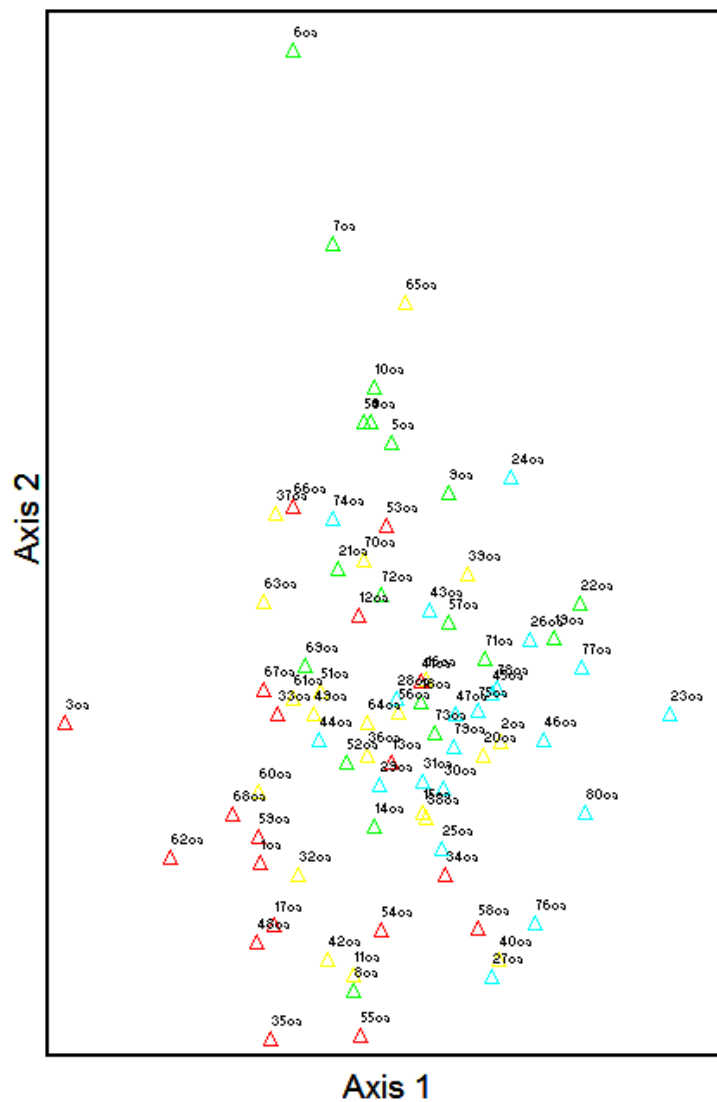
DATA MATRICES
-----
Main matrix:
      80 ornek      (rows)
      42 bitki      (columns)

Second matrix:
      80 ornek      (rows)
      20 degisken  (columns)

Finished reading data.
```

Main:VVM_P-2.WK1 Second:CLUSTE~1.WK1 Graph:GRAPHROW.FIL Result: F4 Append Results

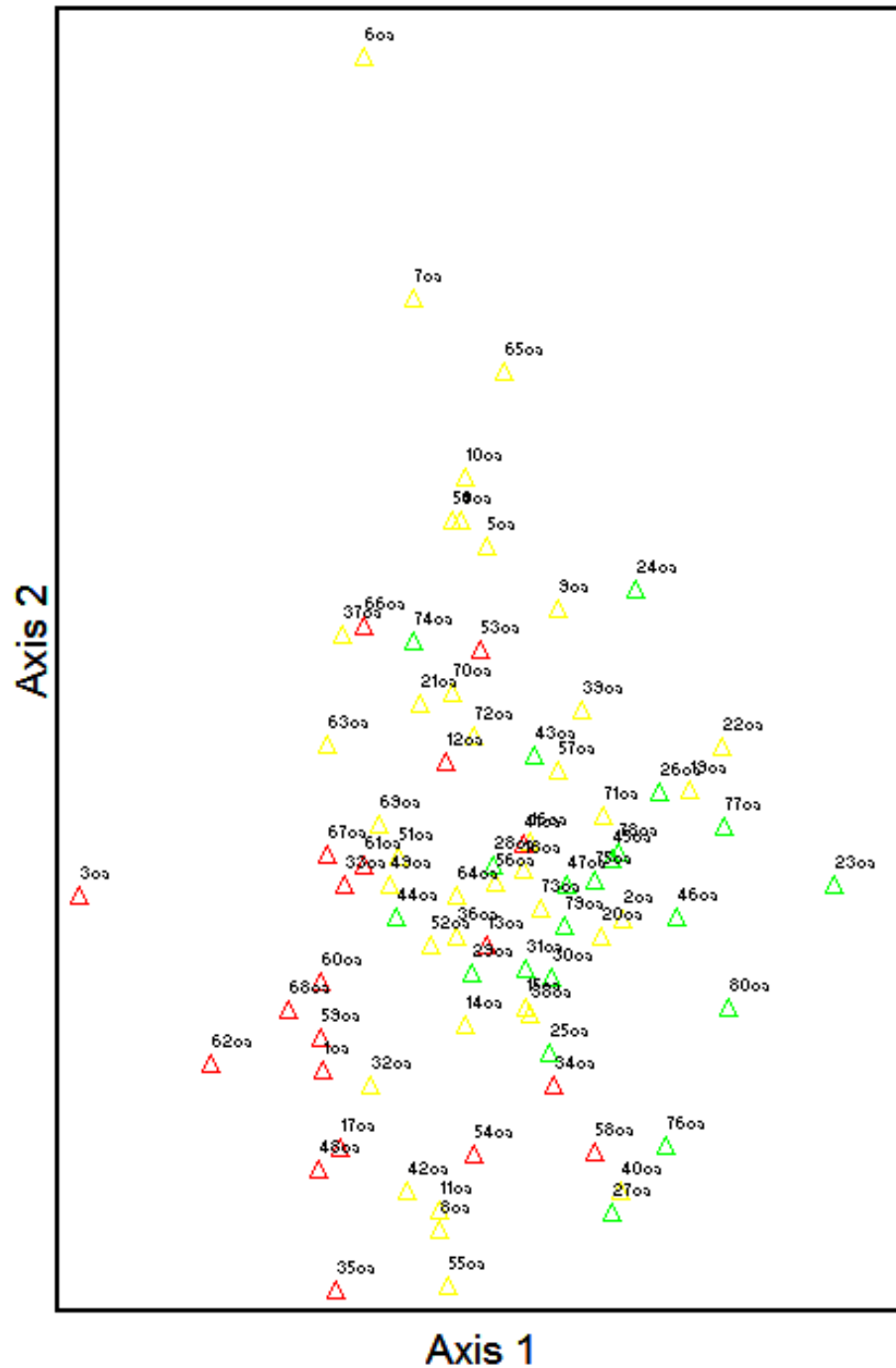
21
31
32
Raw
% Max
Min Max
Σ1
Σ2
r²



Cluster_jw_dort

- △ 1
- △ 2
- △ 3
- △ 4

- | | | | |
|--------|--------|--------|--------|
| | | | |
| BerCra | JasFru | FonPhl | ArbAnd |
| CedLib | QueCoc | PhlGra | CisSal |
| DapOle | PinNig | CotCog | |
| JunExc | StyOff | | |
| JunFoe | | | CraMon |
| PruDiv | | | MryCom |
| RosCan | | | NerOle |
| | | | OleOle |
| | | | PhyLat |
| | | | PinBru |



Cluster_jw_uc

- △ 1
- △ 2
- △ 3



BerCra

JasFru

ArbAnd

CedLib

PhlGra

CisSal

CotNum

QueCoc

CotCog

DapOle

CraMon

JunExc

FonPhl

PhlArm

MryCom

PruDiv

NerOle

RosCan

OleOle

SorUmb

PalSpi

PhyLat

PinBru

PisTer

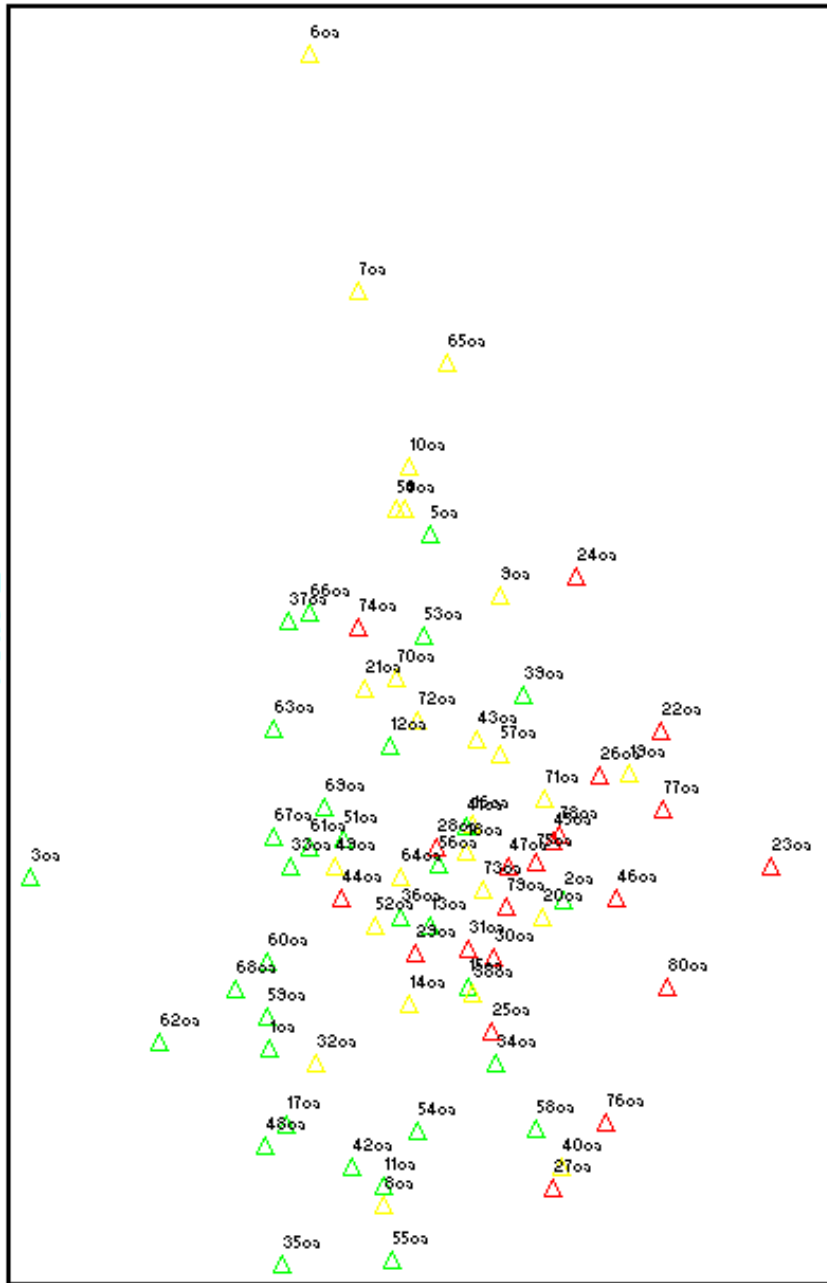
PlaOri

Quellx

StyOff

VitAgn

Axis 2



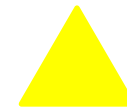
grup

- △ 1
- △ 2
- △ 3

TWINSpan 1
İndikatör



PinBru
ArbAnd
MyrCom
PisTer
NerOle



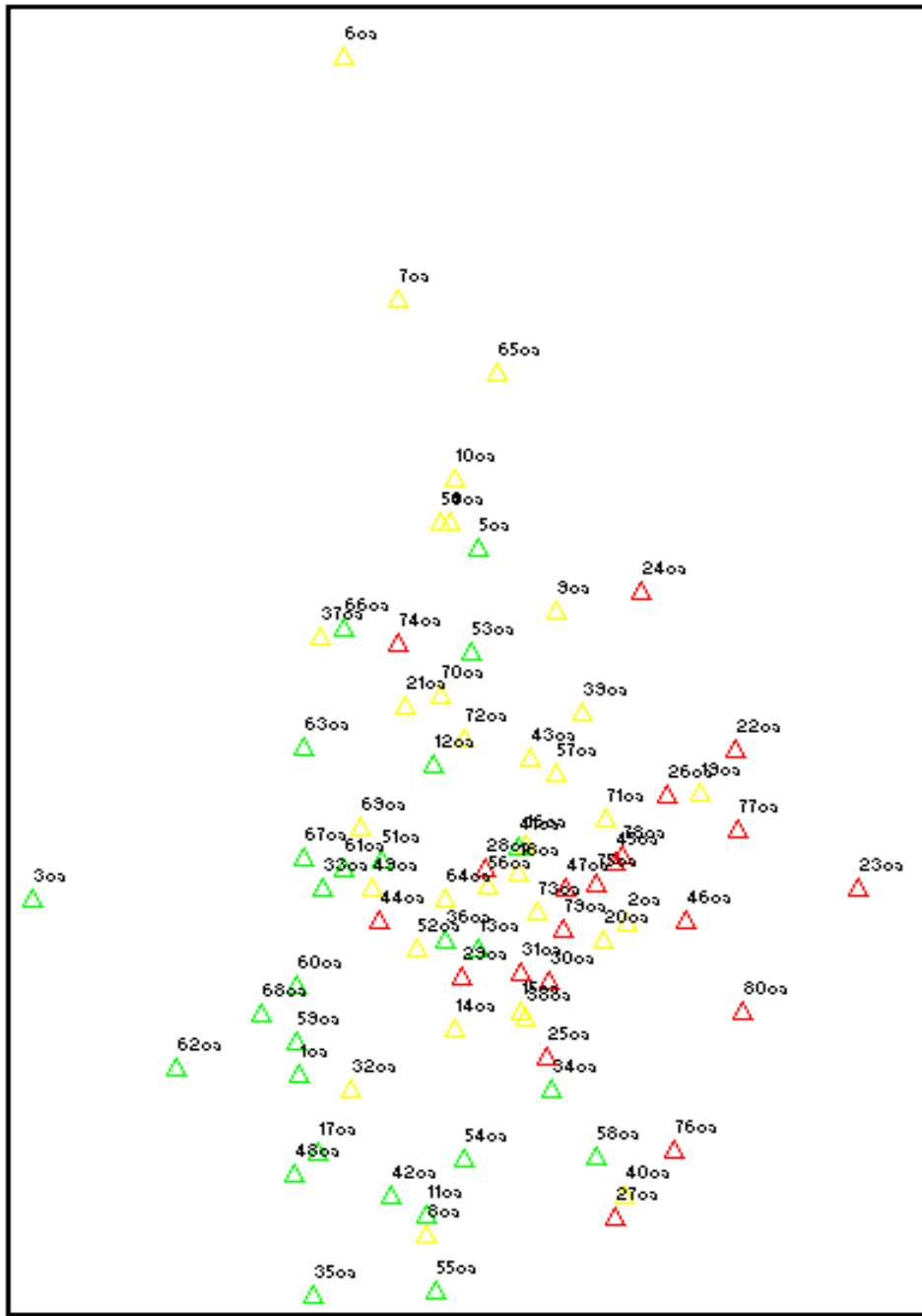
PinNig
JasFru



BerCra
CedLib
JunExc
CotNum

Axis 1

Axis 2



Axis 1

grup

- △ 1
- △ 2
- △ 3

TWINSpan 3
İndikatör



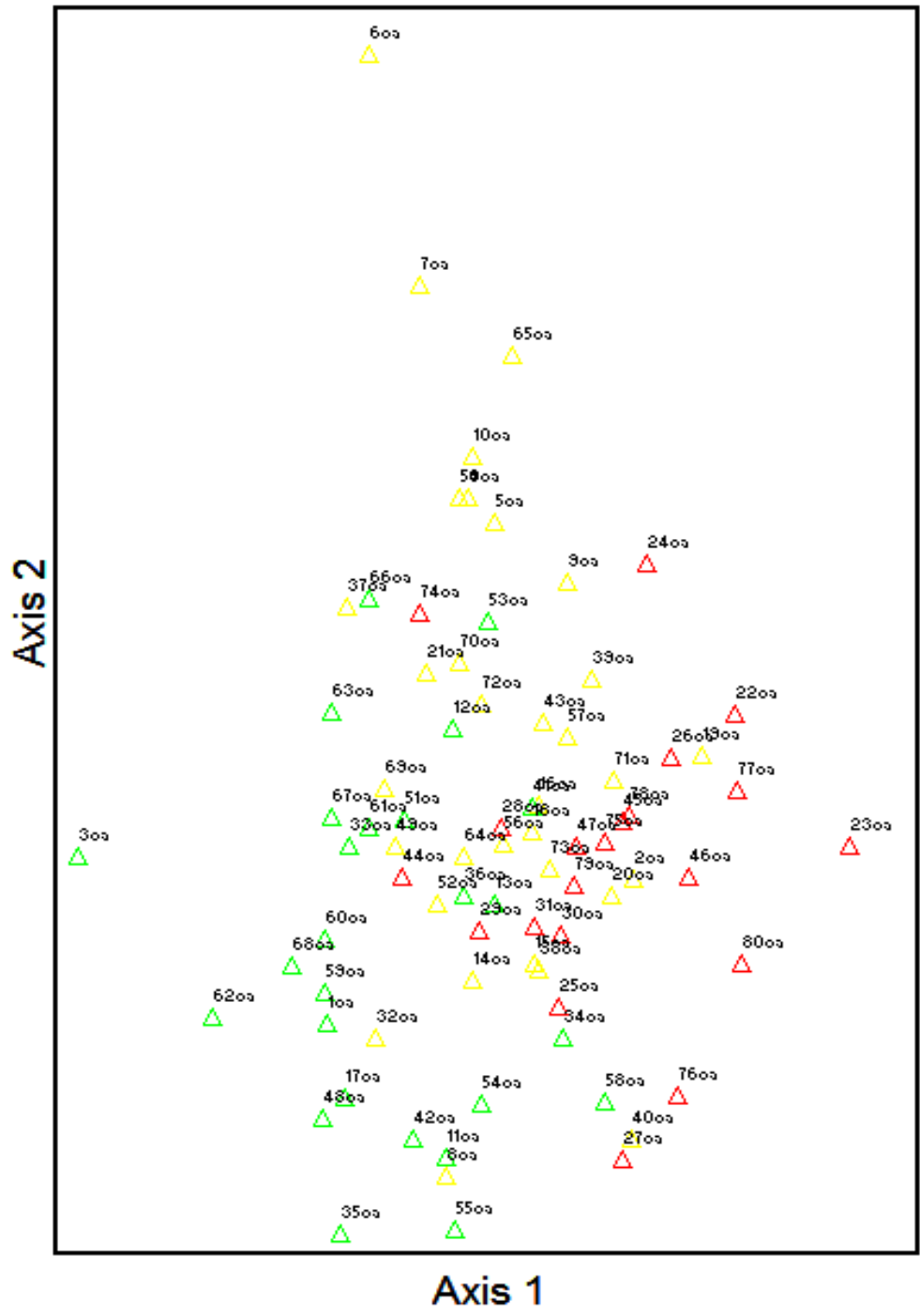
PinBru
ArbAnd
CotCog
MyrCom
PisTer
NerOle



PinNig
JasFru
JunExc



BerCra
CedLib
JunExc
JunCom
CotNum
DapOle
RosCan



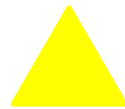
grup

- △ 1
- △ 2
- △ 3

TWINSpan 5
İndikatör



- ArbAnd
- CotCog
- MryCom
- CisSal
- NerOle
- PinBru
- PisTer
- Quellx
- VitAg

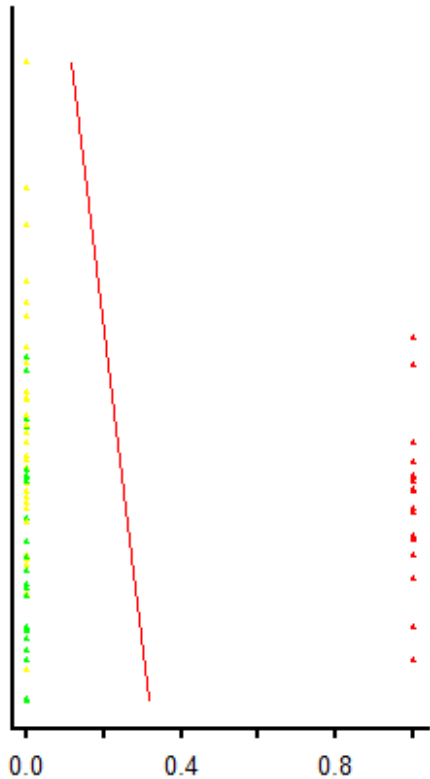


- CraOri
- JasFru
- JunExc
- PinNig

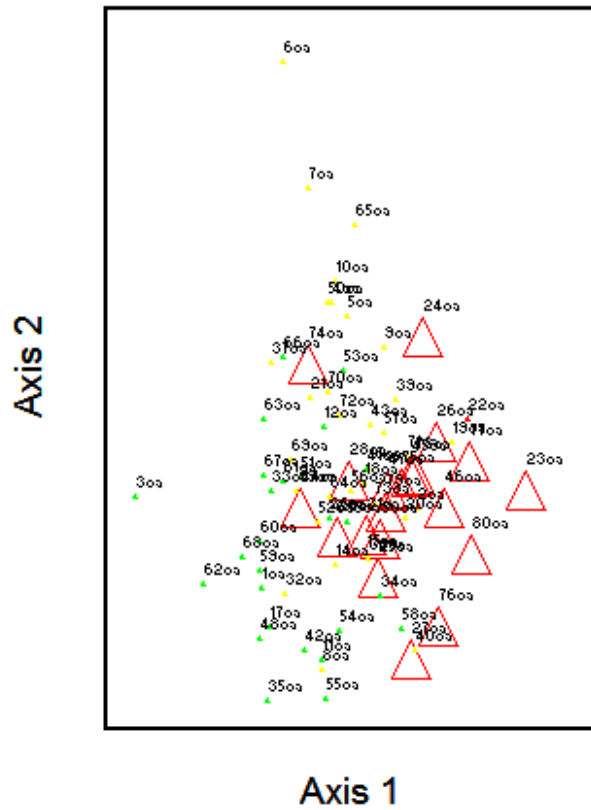


- BerCra
- CedLib
- CotNum
- JunCom
- JunExc

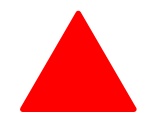
TWINSPAN 5 Indikator



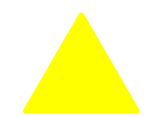
ArbAnd
 Axis 1
 $r = .491$ $\tau = .406$
 Axis 2
 $r = -.083$ $\tau = -.050$



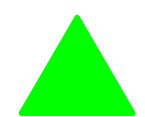
grup
 △ 1
 △ 2
 △ 3



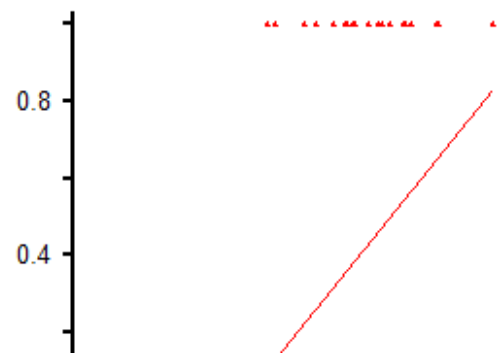
ArbAnd
 CotCog
 MryCom
 CisSal
 NerOle
 PinBru
 PisTer
 Quellx
 VitAgn



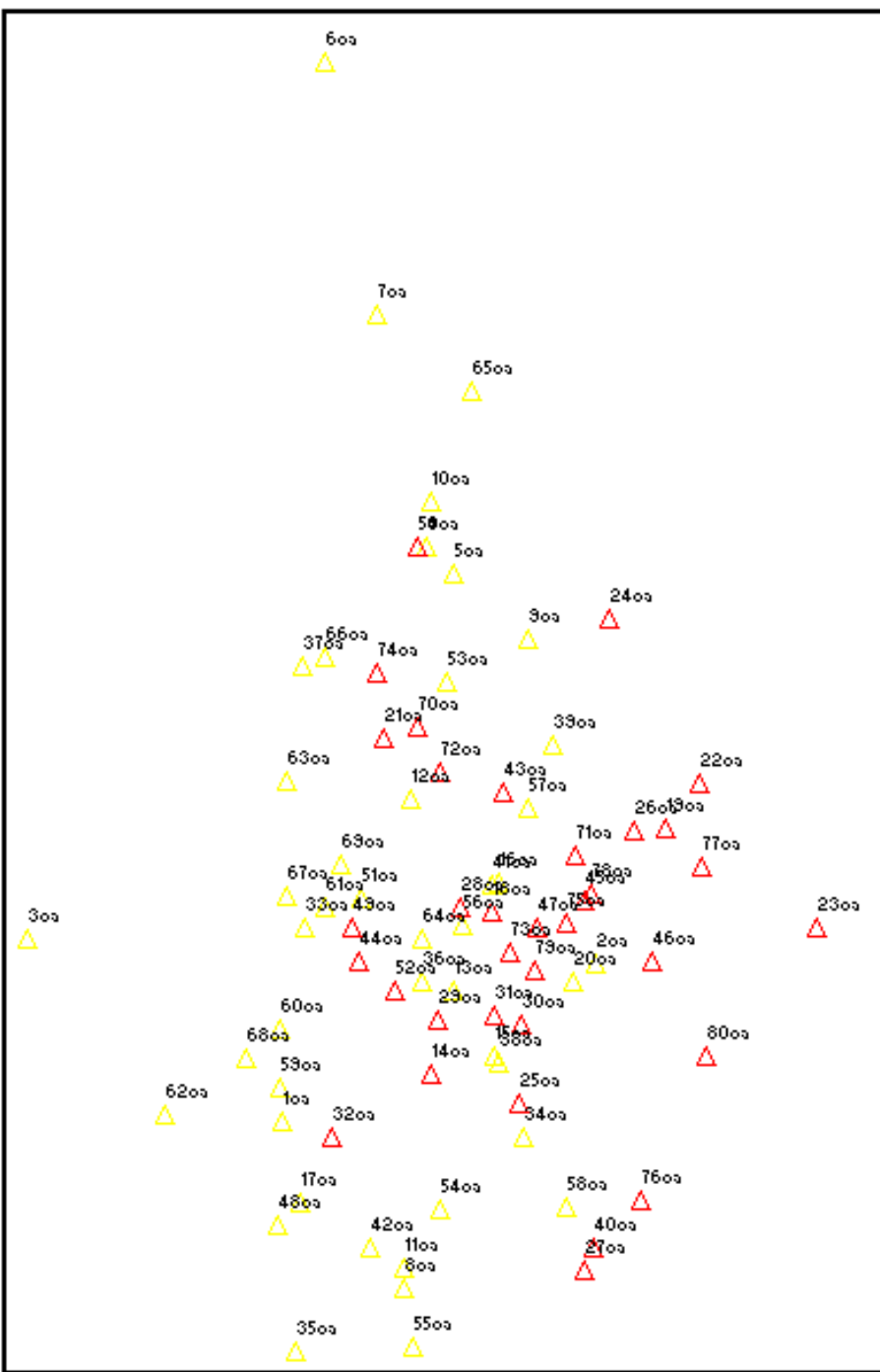
CraOri
 JasFru
 JunExc
 PinNig



BerCra
 CedLib
 CotNum
 JunCom
 JunExc



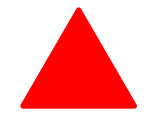
Axis 2



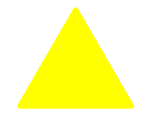
Birlikte_jw_iki

- △ 1
- △ 2

Birliktelik 2 li ayırım



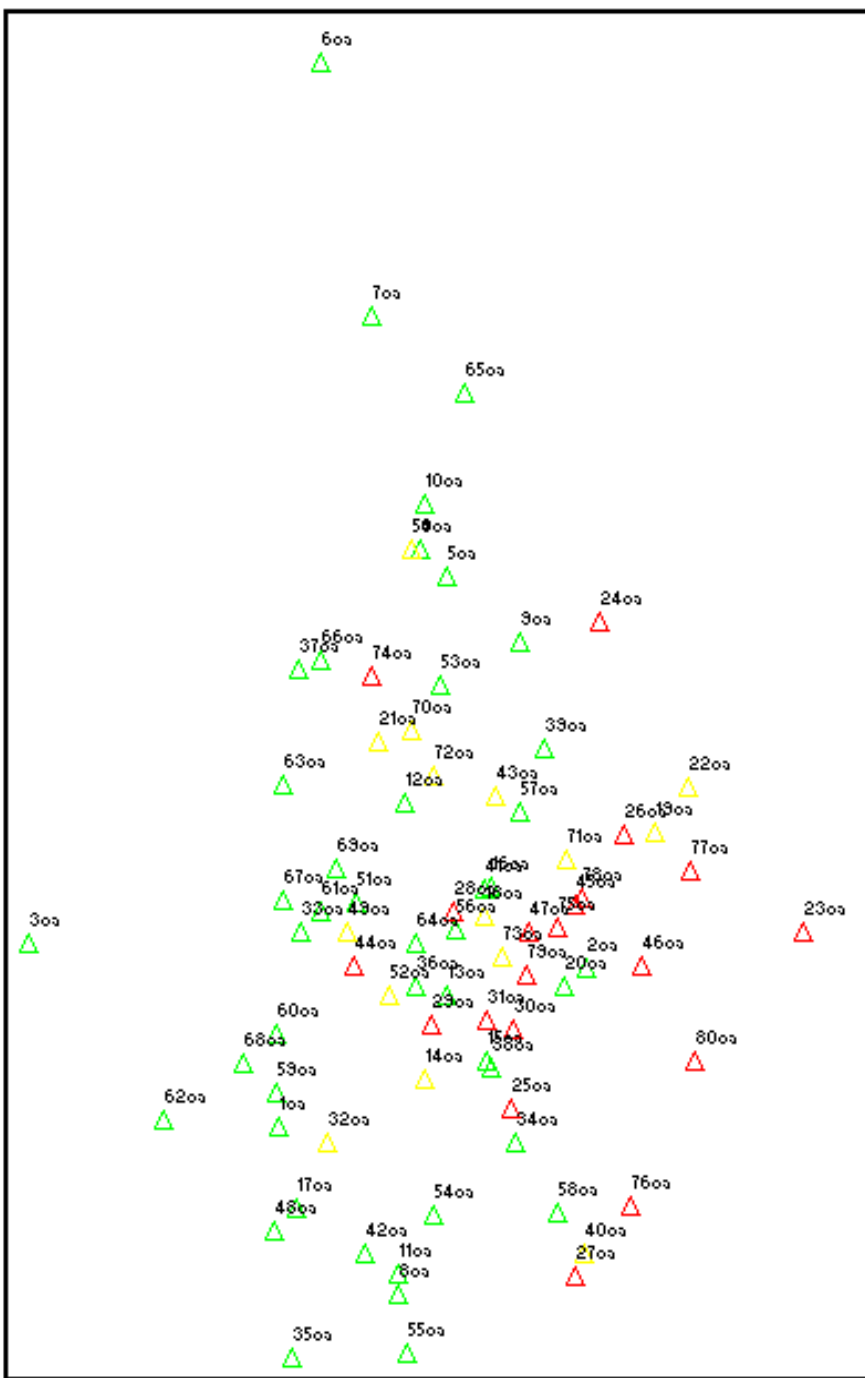
PinBru
var



Pinbru yok

Axis 1

Axis 2



Axis 1

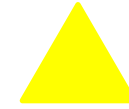
Birlikte_jw_uc

- △ 1
- △ 2
- △ 3

Birliktelik 3 li ayırım



ArbAnd
var



ArbAnd
yok

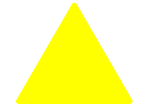


Pinbru yol

Birliktelik 4 li ayırım

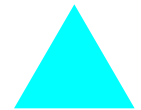
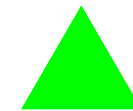
birlikte_jw_dort

- △ 1
- △ 2
- △ 3
- △ 4



ArbAnd
var

ArbAnd
yok

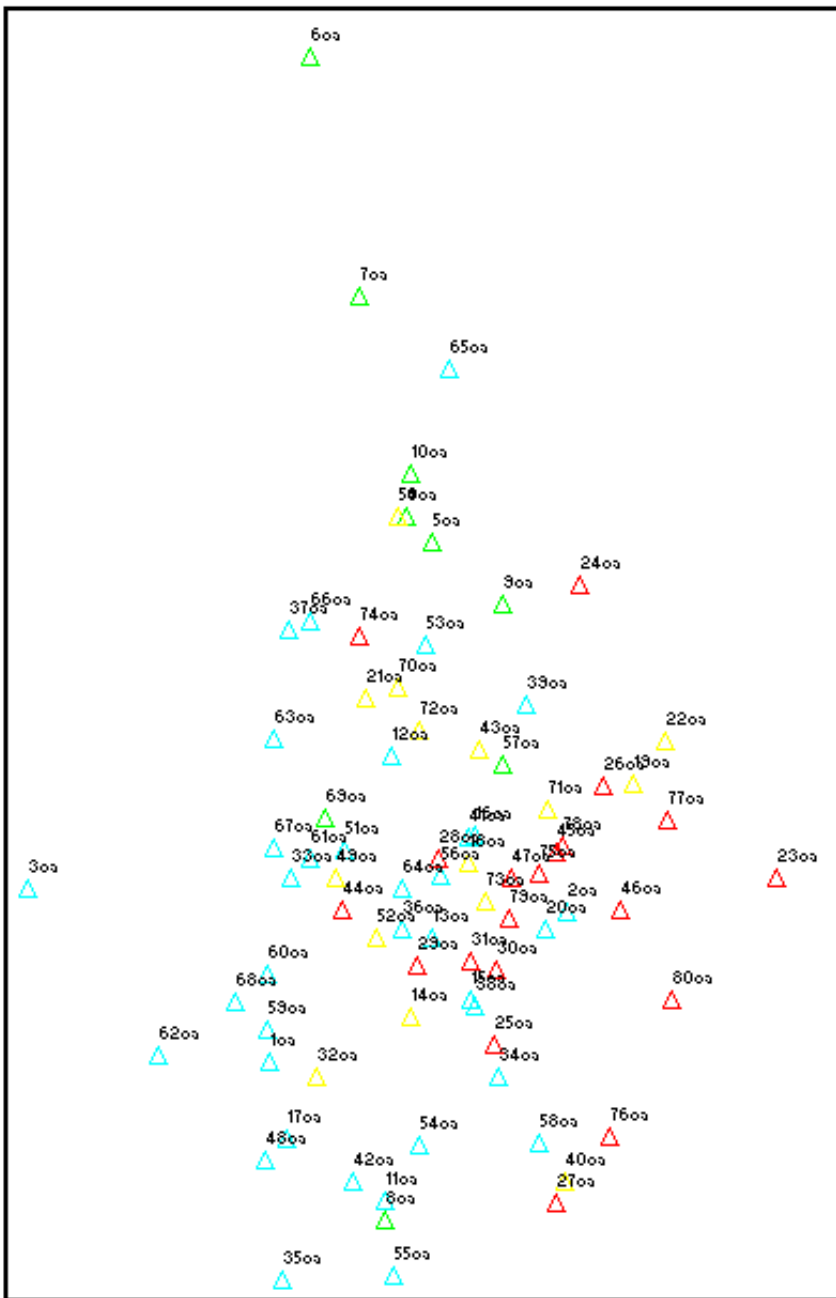


Syroff
var

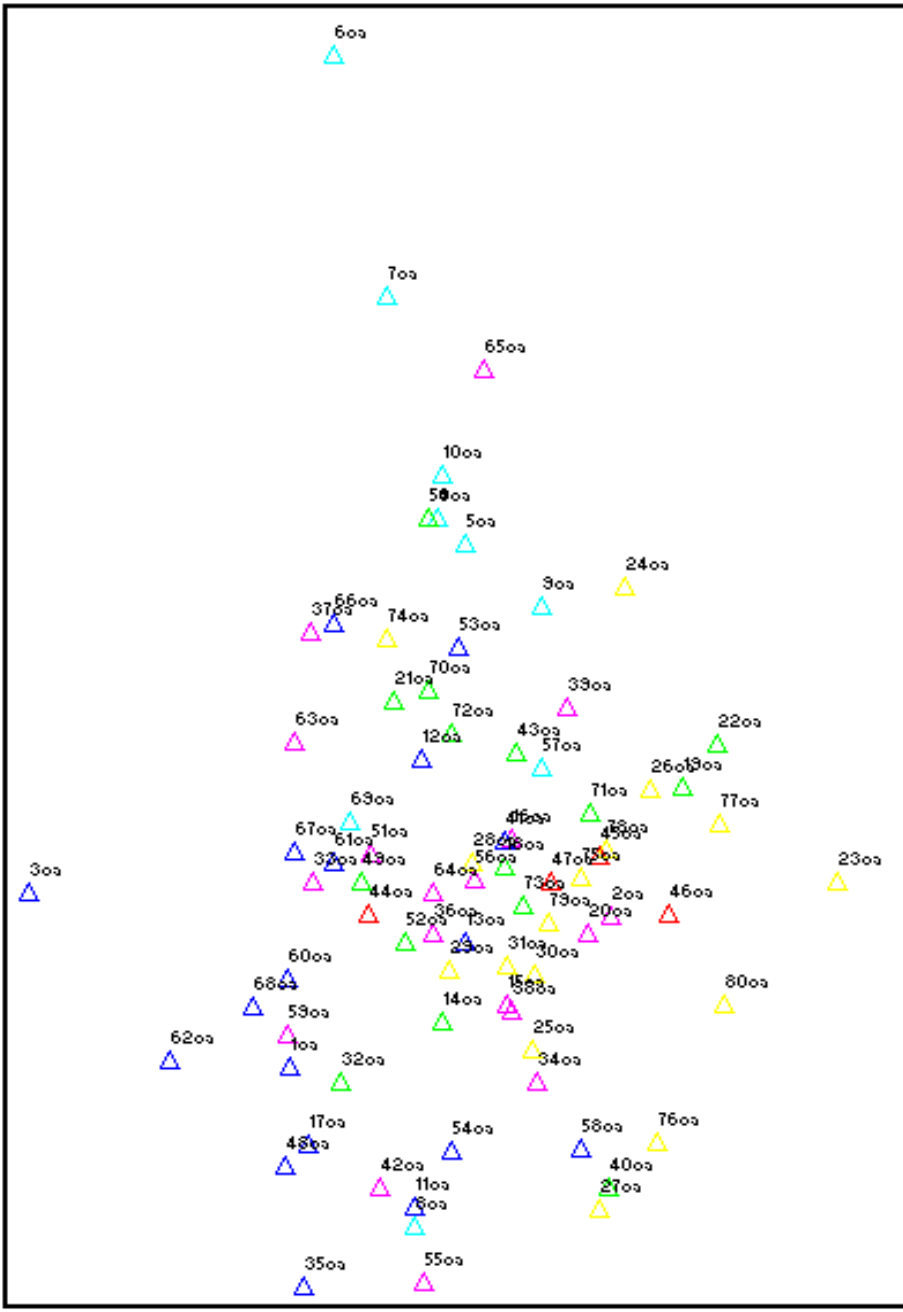
Syroff
yok

Axis 2

Axis 1



Axis 2



Axis 1

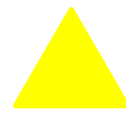
Birlikte_jw_alti

- △ 1
- △ 2
- △ 3
- △ 4
- △ 5
- △ 6

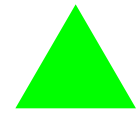
Birliktelik 6 li ayırım



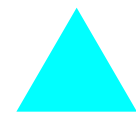
Dapole var



Dapole yok



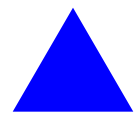
ArbAnd yok



Syroff var



Quecoc yok



Quecoc yok

Çevresel veri matrisi Kruskal wall h ve Khi kare testleri yapıldıktan sonra ilişkili olan değişkenler tespit edildi. Tespit edilen değişkenler kullanılarak yeni bir cedresel veri matrisi oluşturuldu. Daha sonrasında bu yeni çevresel veri matrisi kullanılarak işlemler tekrardan yapıldı.

Microsoft Excel - CVM_new

Dosya Düzen Görünüm Ekle Biçim Araçlar

G16 fx 30,532226415094

	A	B	C	D
1	80	ornek		
2	20	degisken		
3		q	q	q
4		yukslt	radinx	egim
5	oa1	1462	0,066987	9E
6	oa2	1545	0,982963	1C
7	oa3	1485	0,066987	8C
8	oa4	1089	0,933013	6C
9	oa5	1224	0,982963	2E
10	oa6	1010	0,066987	7E
11	oa7	1030	0,982963	5E
12	oa8	1028	0,982963	6E
13	oa9	990	0,62941	2C
14	oa10	950	0,25	5E
15	oa11	1350	0,066987	0E

Microsoft Excel - CVM_new_11

Dosya Düzen Görünüm Ekle Biçim Araçlar

K6 fx 0

	A	B	C	D	
1	80	ornek			
2	11	degisken			
3		q	q	q	q
4		yukslt	yuztas	topder	kui
5	oa1	1462	90	20,50	
6	oa2	1545	60	7,19	
7	oa3	1485	60	32,81	
8	oa4	1089	30	26,48	
9	oa5	1224	60	22,04	
10	oa6	1010	40	41,12	
11	oa7	1030	70	26,04	
12	oa8	1028	80	15,76	
13	oa9	990	20	33,12	
14	oa10	950	50	27,40	
15	oa11	1350	90	7,68	

AXIS SUMMARY STATISTICS

Number of canonical axes: 3

Total variance ("inertia") in the species data: 3.897

	Axis 1	Axis 2	Axis 3
Eigenvalue	.201	.554	.197
Variance in species data			
% of variance explained	5.2	14.2	5.0
Cumulative % explained	5.2	19.4	24.4
Pearson Correlation, Spp-Envt*	.520	.395	.517
Kendall (Rank) Corr., Spp-Envt	.255	.301	.350

* Correlation between sample scores for an axis derived from the species data and the sample scores that are linear combinations of the

AXIS SUMMARY STATISTICS

Number of canonical axes: 3

Total variance ("inertia") in the species data: 3.897

	Axis 1	Axis 2	Axis 3
Eigenvalue	.514	.153	.109
Variance in species data			
% of variance explained	13.2	3.9	2.8
Cumulative % explained	13.2	17.1	19.9
Pearson Correlation, Spp-Envt*	.927	.758	.746
Kendall (Rank) Corr., Spp-Envt	.746	.456	.579

* Correlation between sample scores for an axis derived from the data and the sample scores that are linear combinations of

Axis:	Percent Of Variance In Distance Matrix								
	r	r-sq	tau	r	tau	r	r-sq	tau	r
ArbAnd	.491	.241	.406	-.083	.007	-.050	-.174	.030	-.148
BerCra	-.302	.091	-.263	-.286	.082	-.229	.058	.003	.080
CedLib	-.277	.077	-.232	-.234	.055	-.196	-.062	.004	-.041
CelGlb	-.002	.000	.005	-.066	.004	-.058	-.031	.001	-.030
CisSal	.388	.151	.315	-.023	.001	.018	-.108	.012	-.100
CotNum	-.281	.079	-.213	-.060	.004	-.031	.082	.007	.099
CotCog	.495	.245	.388	-.077	.006	-.043	-.107	.011	-.082
CraOri	-.140	.020	-.113	.052	.003	.085	-.125	.016	-.115
CraMon	.318	.101	.243	-.025	.001	-.026	-.019	.000	.025
DapOle	-.097	.009	-.082	.011	.000	.008	.102	.010	.106
DapSer	.217	.047	.153	-.146	.021	-.049	.148	.022	.132
FonPhl	.187	.035	.149	.265	.070	.209	-.132	.017	-.092
FrXOrn	-.032	.001	-.034	.124	.015	.052	-.036	.001	-.045
JasFru	-.099	.010	-.100	-.013	.000	.005	.043	.002	.029
JasCar	.310	.100	.201	.127	.016	.114	.260	.072	.100

Pearson and Kendall Correlations with Ordination Axes N= 80

Axis:	1			2			3		
	r	r-sq	tau	r	r-sq	tau	r	r-sq	tau
ArbAnd	-,660	,436	-,557	-,318	,101	-,178	,128	,016	,103
BerCra	,619	,383	,507	-,058	,003	-,081	,154	,024	,096
CedLib	,475	,226	,392	,048	,002	-,010	-,077	,006	-,083
CelGlb	,103	,011	,093	,116	,013	,082	,156	,024	,144
CisSal	-,559	,313	-,478	-,292	,086	-,201	-,029	,001	-,037
CotNum	,452	,204	,349	,057	,003	,019	,048	,002	,009
CotCog	-,509	,260	-,431	,140	,019	,119	,272	,074	,224
CraOri	,150	,022	,142	,054	,003	,071	-,211	,044	-,204
CraMon	-,217	,047	-,182	-,282	,080	-,203	,084	,007	,060
DapOle	,211	,045	,181	,088	,008	,037	,130	,017	,114
DapSer	-,187	,035	-,160	-,181	,033	-,121	,172	,030	,127
FonPhl	-,427	,182	-,347	,128	,016	,133	-,353	,124	-,278
FrXOrn	-,035	,001	-,021	,198	,039	,153	-,149	,022	-,074
JasFru	-,060	,005	-,060	,247	,061	,177	,001	,000	,000
JasCar	,310	,100	,201	,127	,016	,114	,260	,072	,100

Pearson and Kendall Correlations with Ordination Axes N= 80

Axis:	1			2			3		
	r	r-sq	tau	r	r-sq	tau	r	r-sq	tau
yukslt	-.635	.403	-.458	-.150	.023	-.116	.249	.062	.161
radinx	.128	.016	.097	-.033	.001	-.050	-.035	.001	-.018
egim	-.273	.075	-.190	.132	.018	.087	-.023	.001	.010
yuztas	-.448	.200	-.341	-.051	.003	-.065	.238	.057	.158
topder	.480	.230	.264	-.036	.001	.051	-.129	.017	-.098
kum	-.439	.193	-.269	-.787	.619	-.628	-.409	.167	-.285
toz	.308	.095	.178	-.050	.002	.004	.558	.311	.435
kil	.365	.134	.235	.867	.752	.693	.244	.060	.179
pH	.062	.004	.032	-.119	.014	-.070	.061	.004	.058
kirec	.119	.014	.137	-.109	.012	.007	-.218	.048	-.088
orgmad	-.364	.132	-.116	-.194	.038	-.114	-.011	.000	.069
zyyprz	-.214	.046	-.187	-.059	.003	-.034	.299	.089	.223
krctas	-.494	.244	-.397	-.143	.020	-.094	.096	.009	.072
konglo	.269	.072	.206	-.129	.017	-.116	-.149	.022	-.107
karsk	.327	.107	.271	.255	.065	.192	.011	.000	.005
disbky	-.030	.001	-.021	-.229	.052	-.204	.119	.014	.114
duzarz	-.377	.142	-.285	.057	.003	.064	.254	.064	.183
ondule	.446	.199	.353	-.163	.027	-.052	.072	.005	.042
icbuky	-.051	.003	-.060	.399	.160	.218	-.562	.316	-.425
yamkon	.210	.044	.145	.249	.062	.188	-.173	.030	-.104

Pearson and Kendall Correlations with Ordination Axes N= 80

Axis:	1			2			3		
	r	r-sq	tau	r	r-sq	tau	r	r-sq	tau
yukslt	,942	,887	,822	,005	,000	-,096	-,013	,000	-,006
egim	,121	,015	,084	,213	,045	,122	-,280	,078	-,157
yuztas	,551	,304	,378	,049	,002	-,021	,239	,057	,165
topder	-,503	,253	-,326	,004	,000	,015	,159	,025	,011
kum	,333	,111	,207	-,117	,014	-,053	,073	,005	,019
kil	-,404	,164	-,248	,081	,007	,074	-,312	,097	-,152
kirec	-,285	,081	-,169	-,068	,005	-,002	,138	,019	,115
zyyprz	,380	,144	,321	-,006	,000	-,063	,436	,190	,371
krctas	,754	,569	,620	,454	,206	,349	,153	,023	,104
konglo	-,331	,110	-,280	-,721	,520	-,468	,050	,002	,035
karsk	-,560	,314	-,455	,069	,005	-,014	-,205	,042	-,140
yamkon	-,397	,158	-,297	,306	,094	,258	-,038	,001	-,023

Vejetasyon Çevre İlişkileri - Analitik Değerlendirmeler



13-19 Ocak 2014/ ANTALYA

Coefficients of determination for the correlations between ordination distances and distances in the original n-dimensional space:

Axis	R Squared	
	Increment	Cumulative
1	.069	.069
2	-.040	.028
3	.005	.033

Number of entities = 80

Number of entity pairs used in correlation = 3160

Distance measure for ORIGINAL distance: Sorensen $1 - 2W/(A+B)$

Coefficients of determination for the correlations between ordination distances and distances in the original n-dimensional space:

Axis	R Squared	
	Increment	Cumulative
1	,282	,282
2	-,060	,222
3	,015	,236

Number of entities = 80

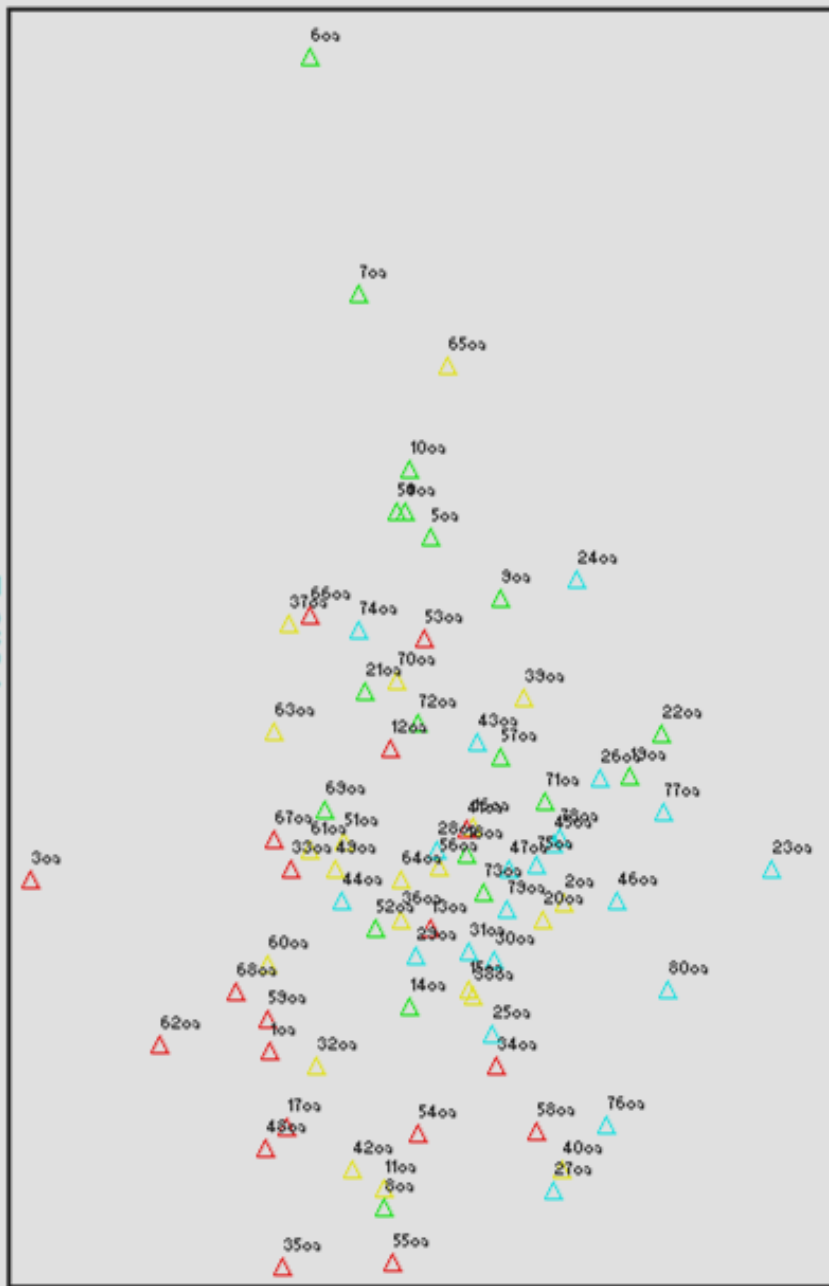
Number of entity pairs used in correlation = 3160

Distance measure for ORIGINAL distance: Sorensen $1 - 2W/(A+B)$

Axis 2

Cluster_jw_dort

- △ 1
- △ 2
- △ 3
- △ 4



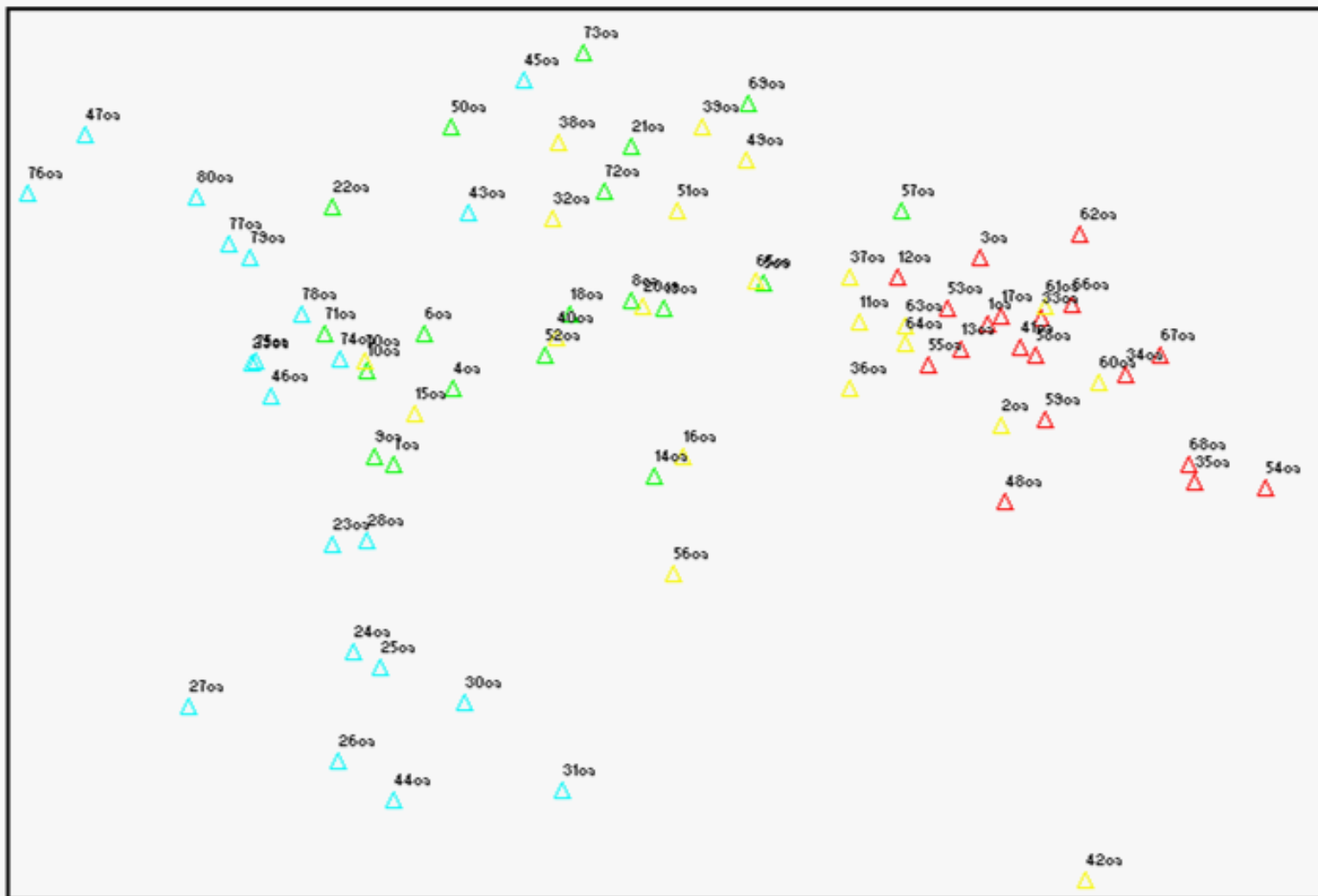
Axis 1

Axis 2

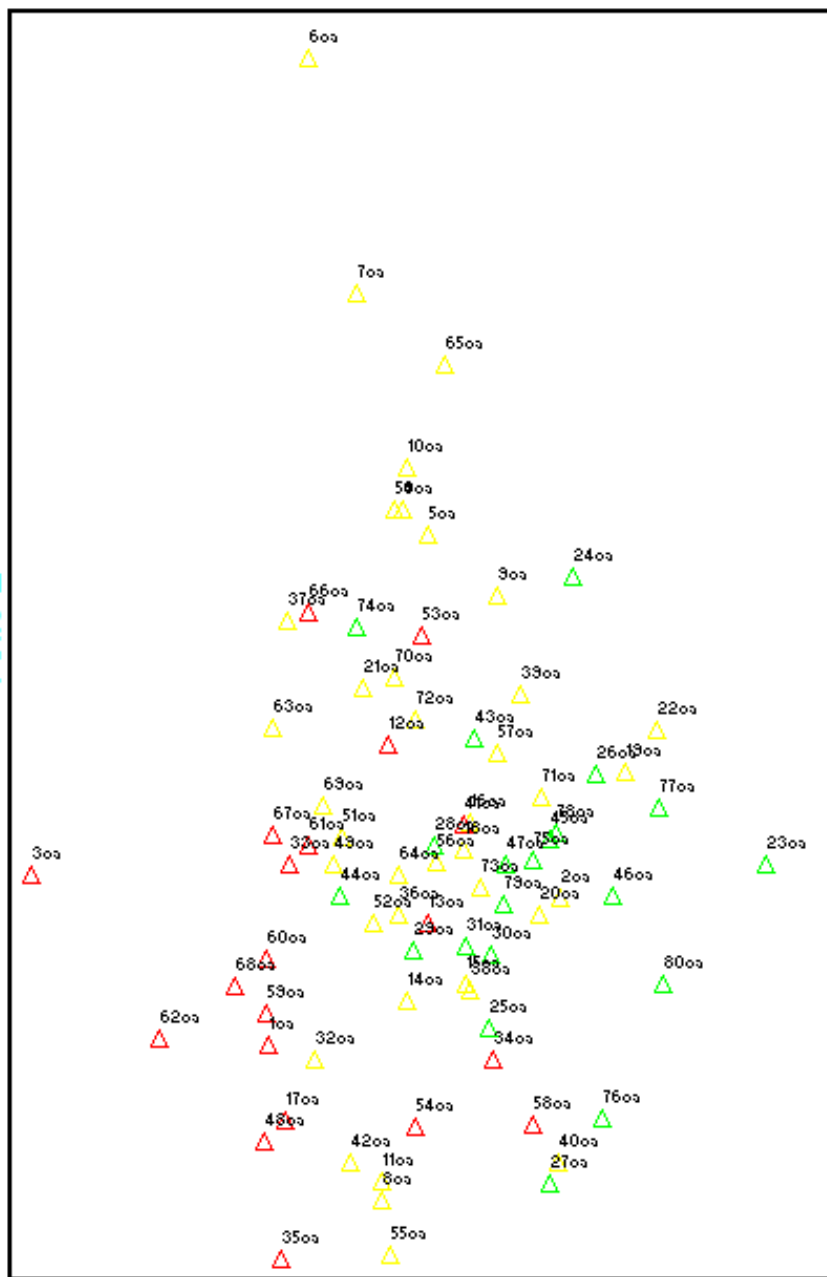
Axis 1

Cluster_jw_dort

- △ 1
- △ 2
- △ 3
- △ 4



Axis 2



Cluster_jw_uc

- △ 1
- △ 2
- △ 3

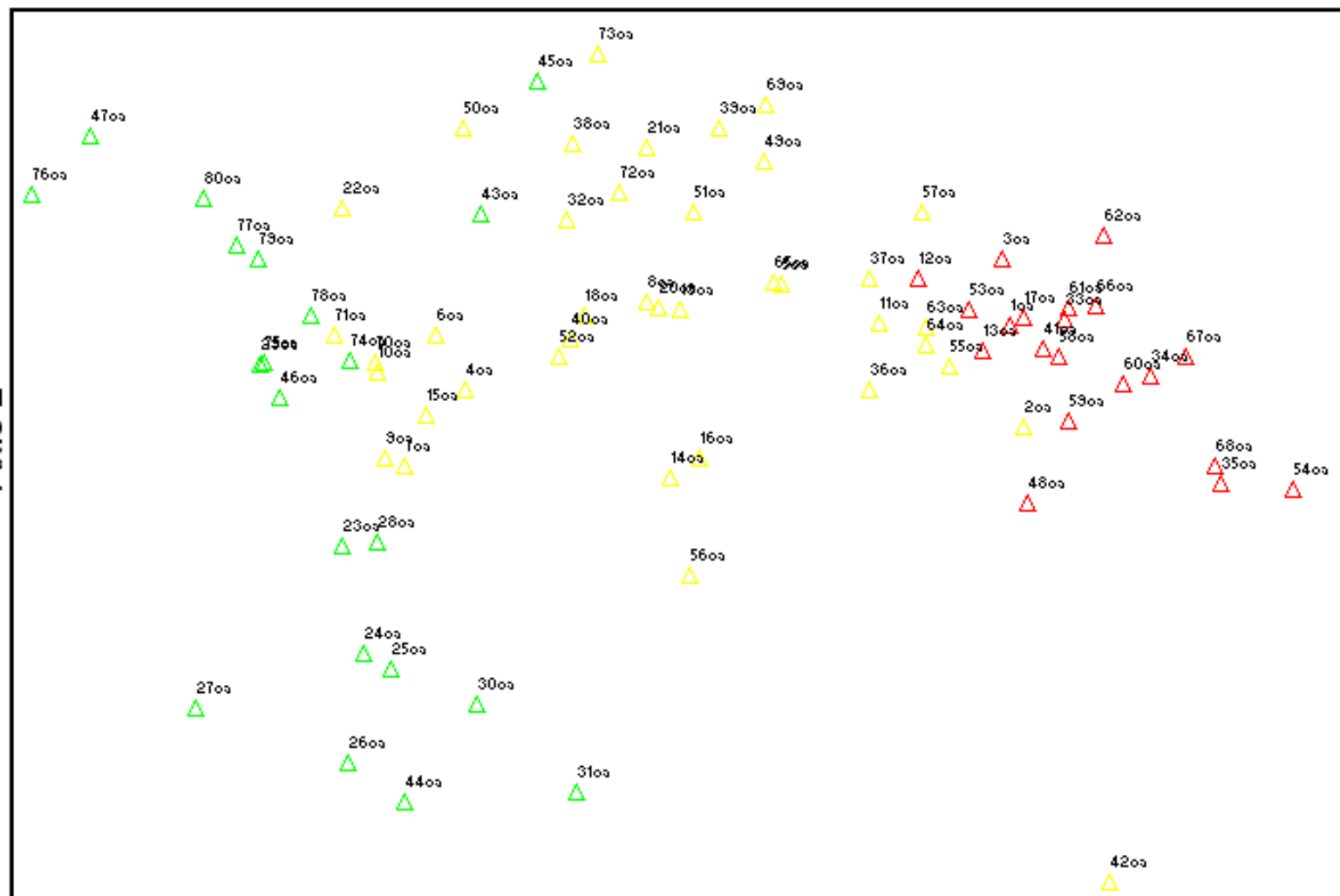
Axis 1

Axis 2

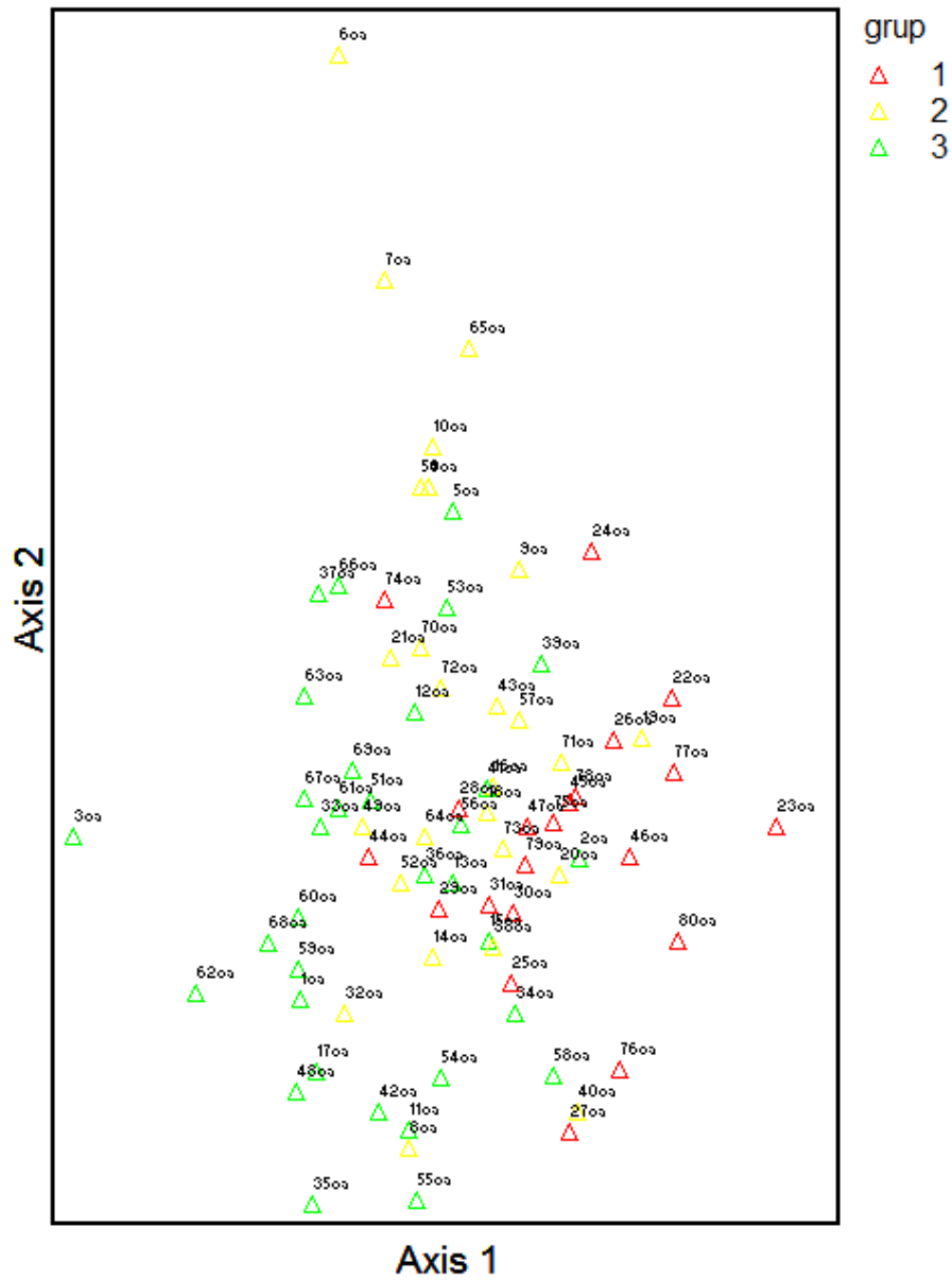
Axis 1

Cluster_jw_uc

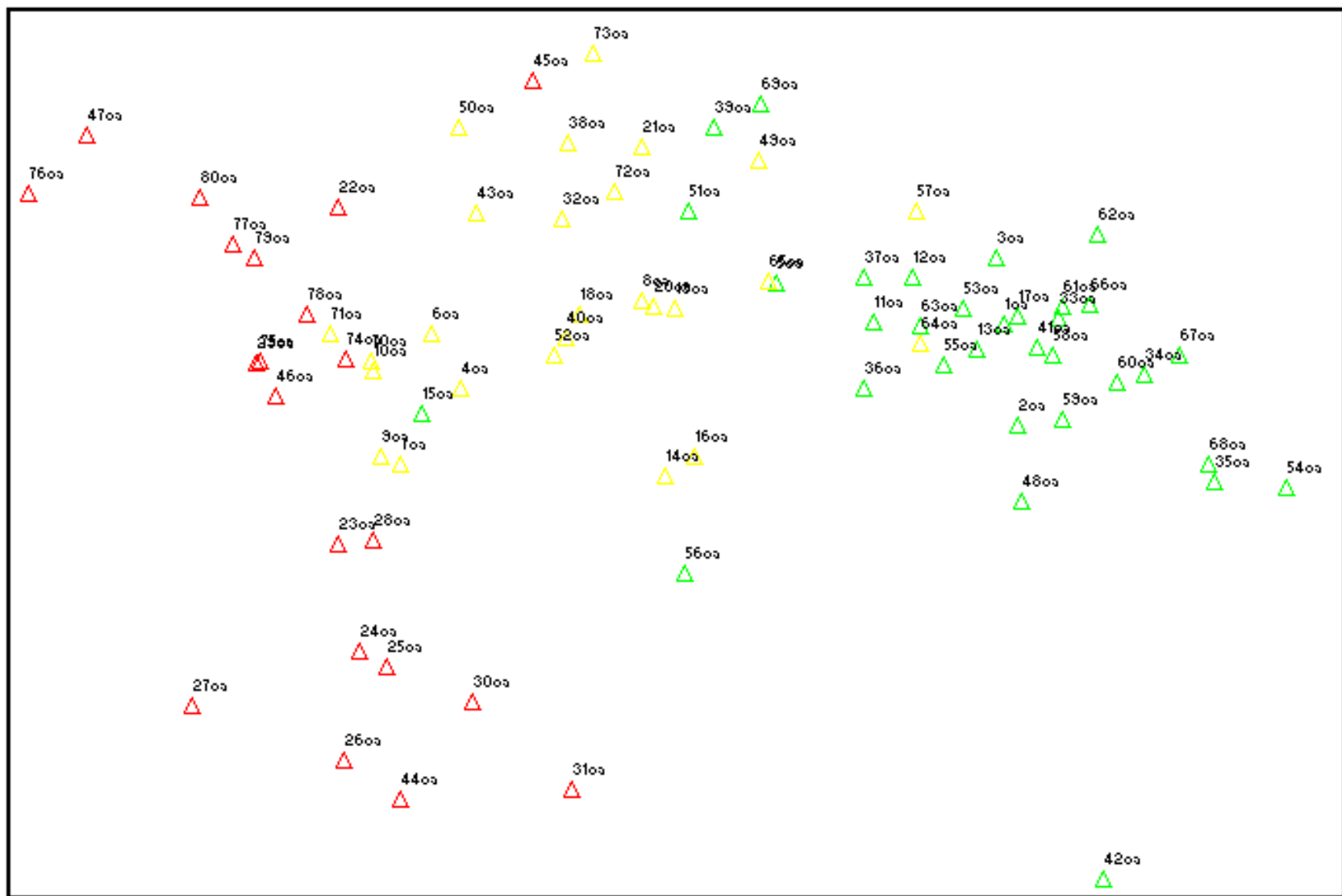
- △ 1
- △ 2
- △ 3



TWINSpan 1 Indikator

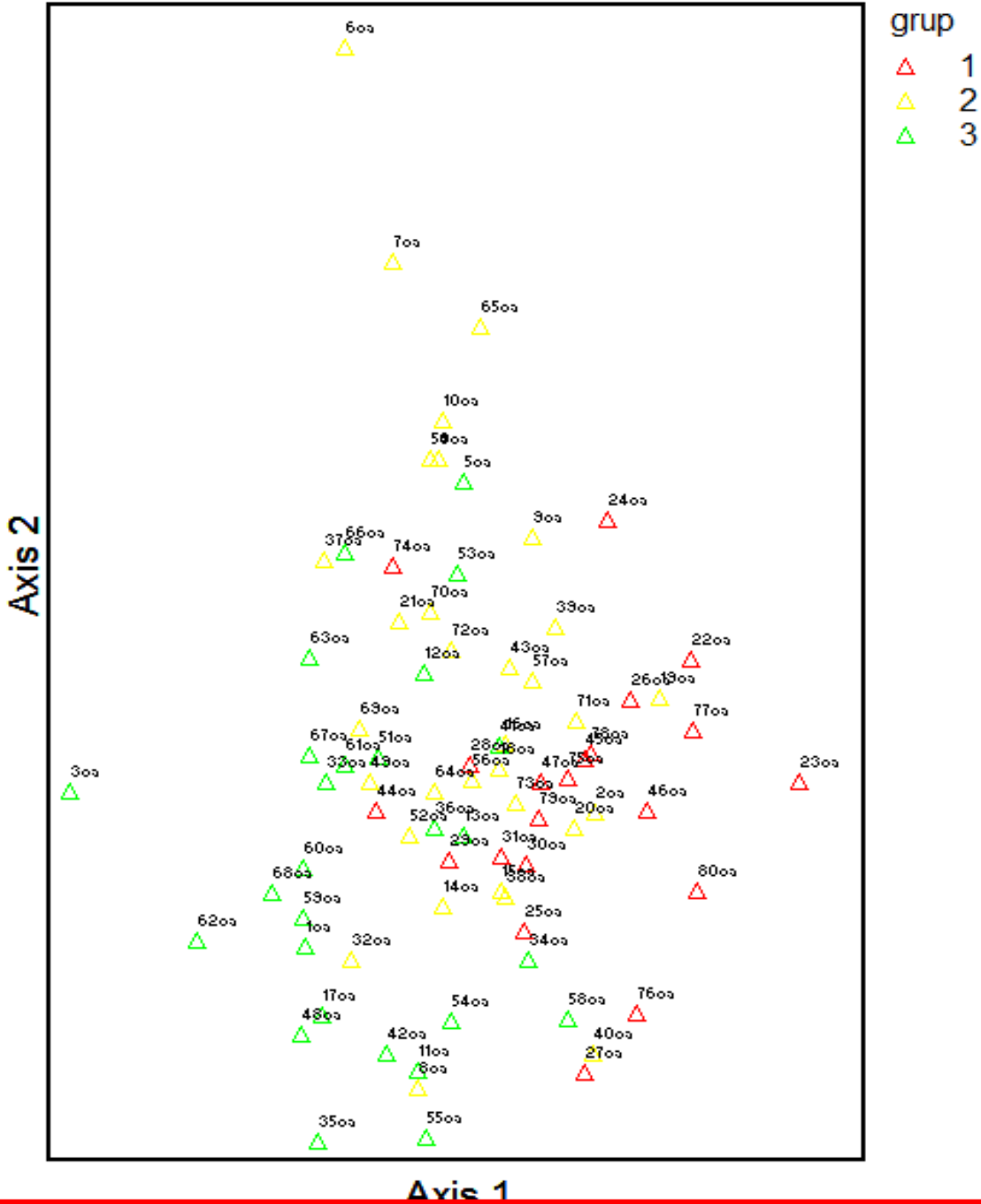


Axis 2

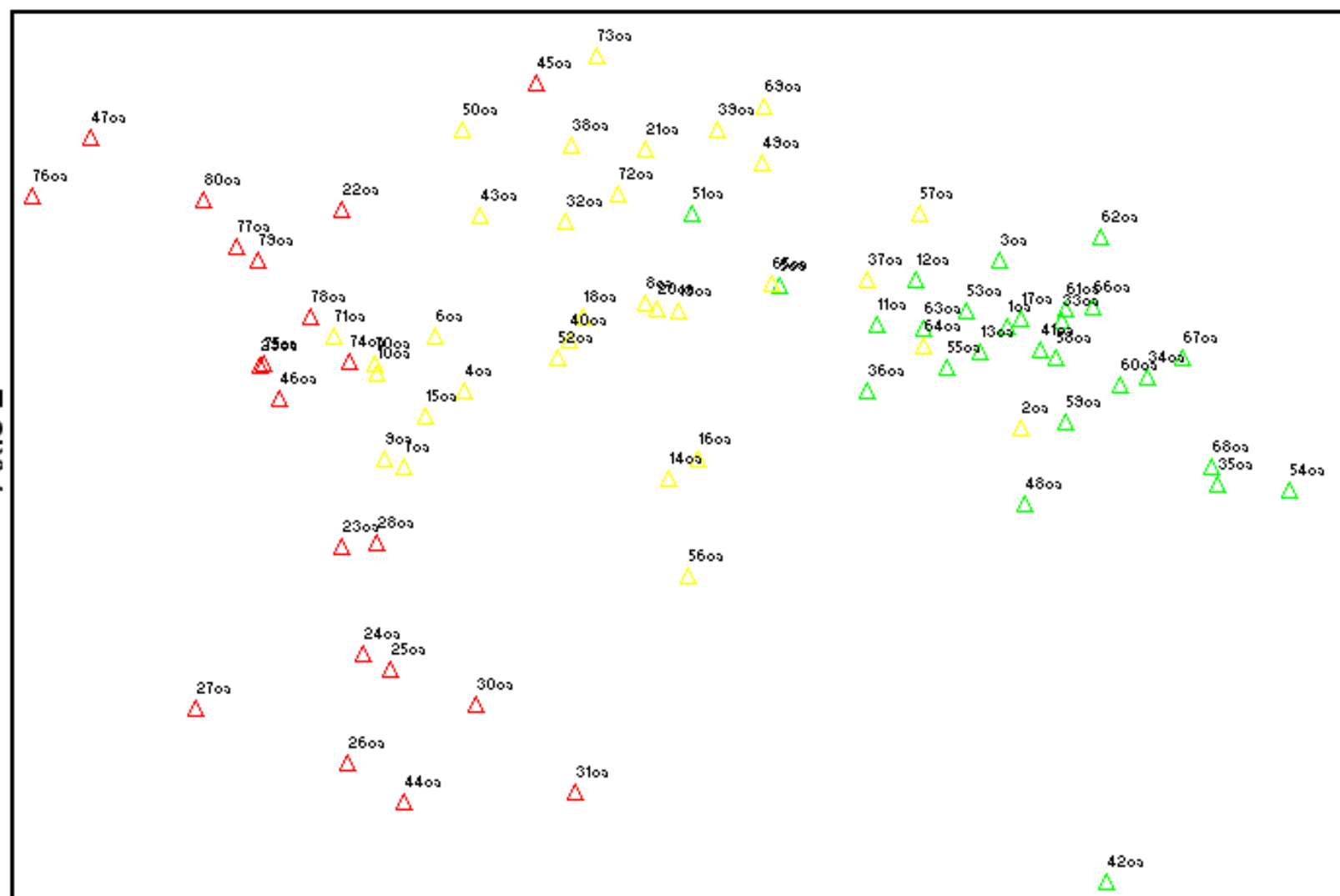


Axis 1

TWINSPAN 3
İndikatör



Axis 2

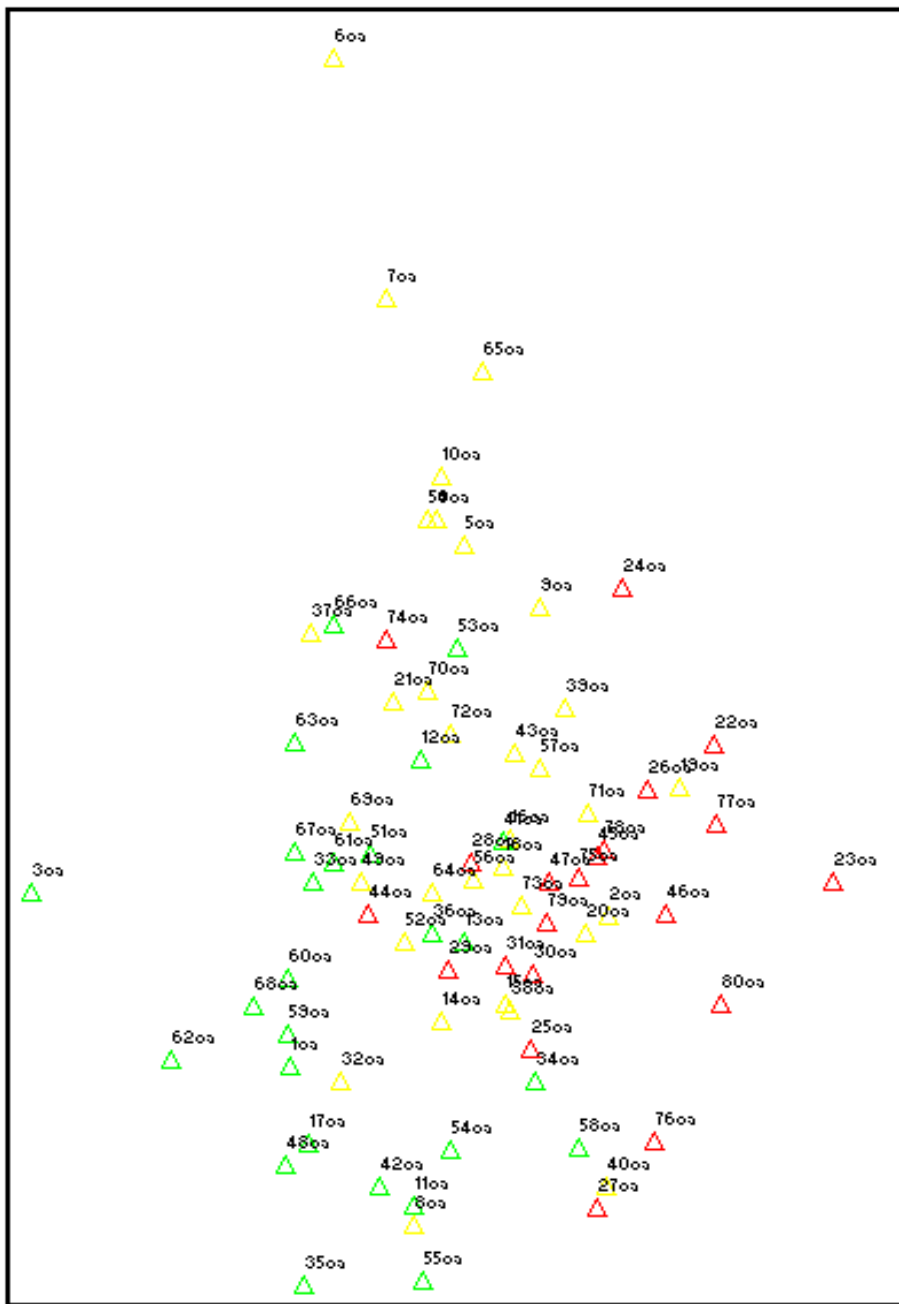


grup

- △ 1
- △ 2
- △ 3

Axis 1

Axis 2

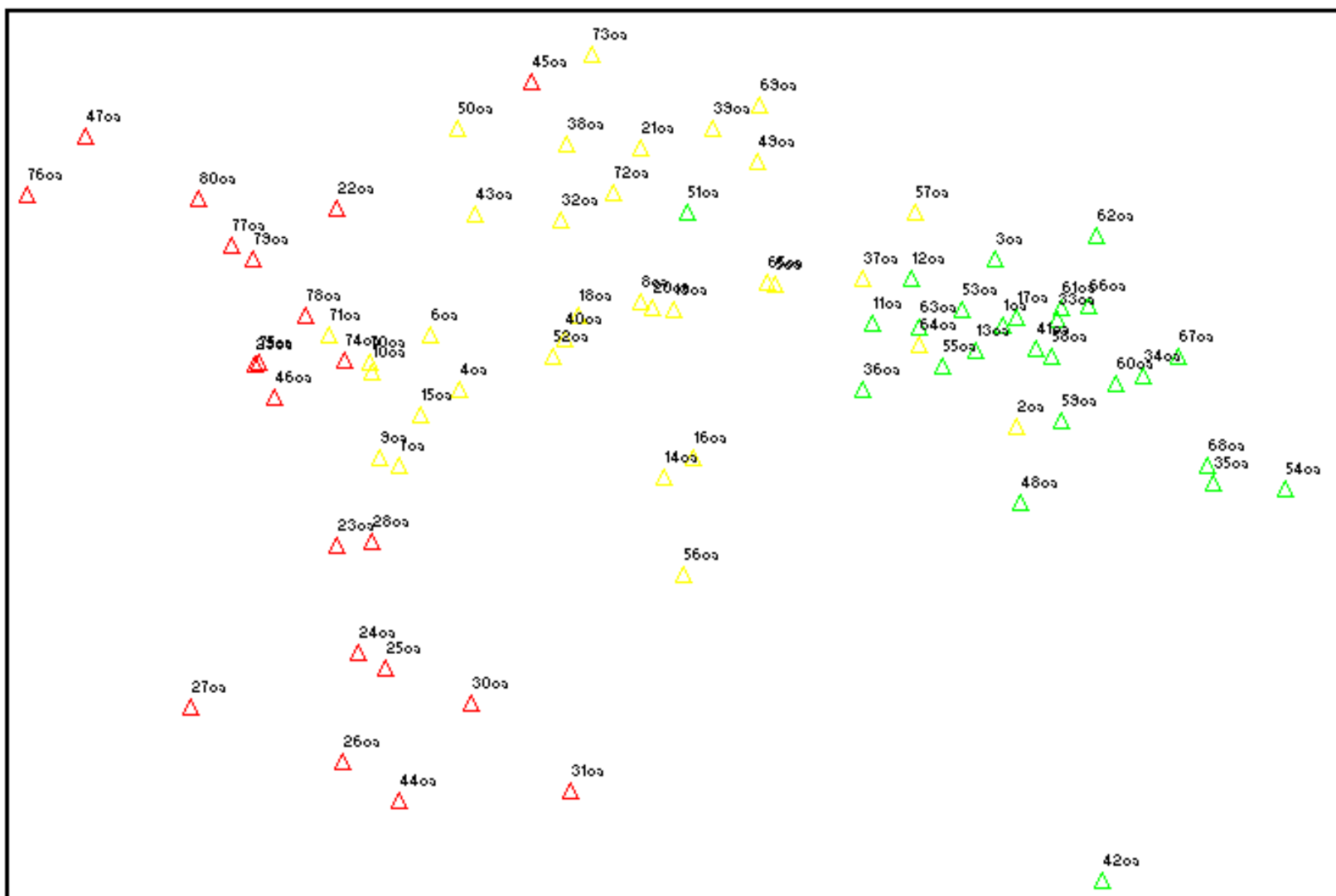


grup
△ 1
△ 2
△ 3

Axis 1

TWINSpan 5
İndikatör

Axis 2



grup

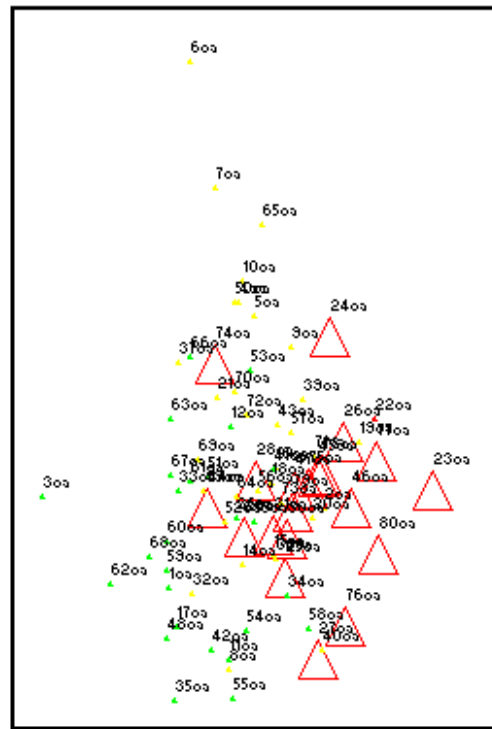
- △ 1
- △ 2
- △ 3

Axis 1

TWINSPAN 5 İndikatör



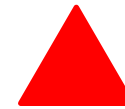
Axis 2



grup

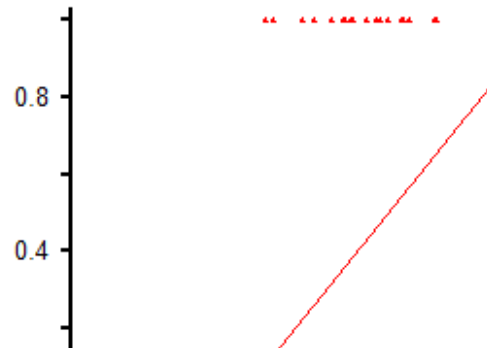
- △ 1
- △ 2
- △ 3

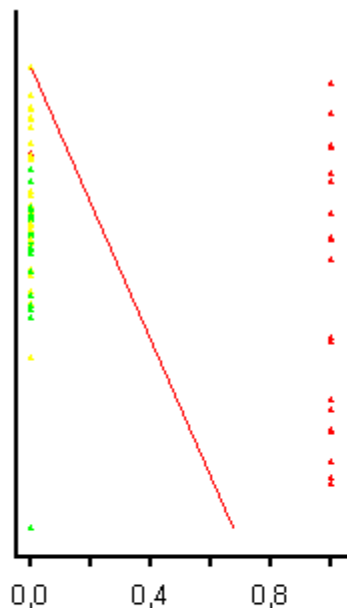
Axis 1



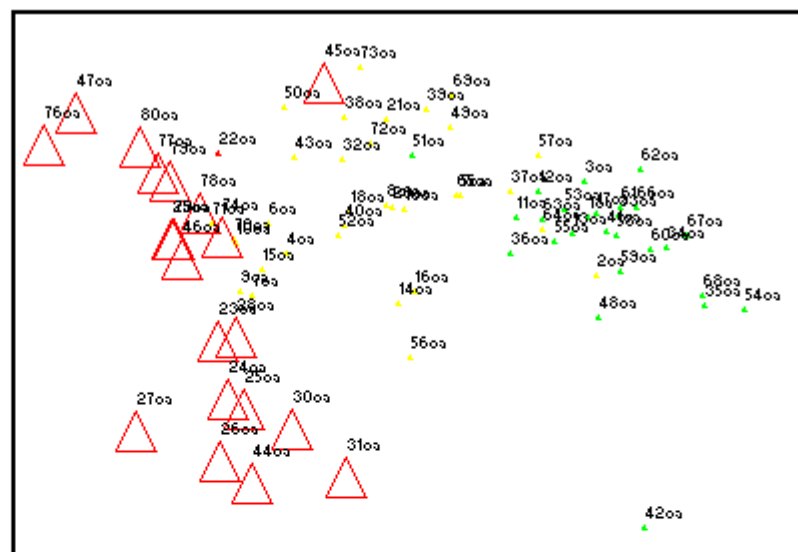
- ArbAnd
- CotCog
- MryCom
- CisSal
- NerOle
- PinBru
- PisTer
- Quellx
- VitAgn

ArbAnd
Axis 1
 $r = .491$ $\tau = .406$
Axis 2
 $r = -.083$ $\tau = -.050$





Axis 2

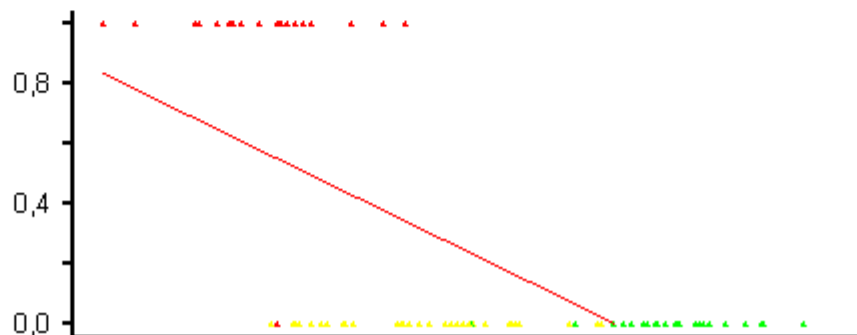


grup

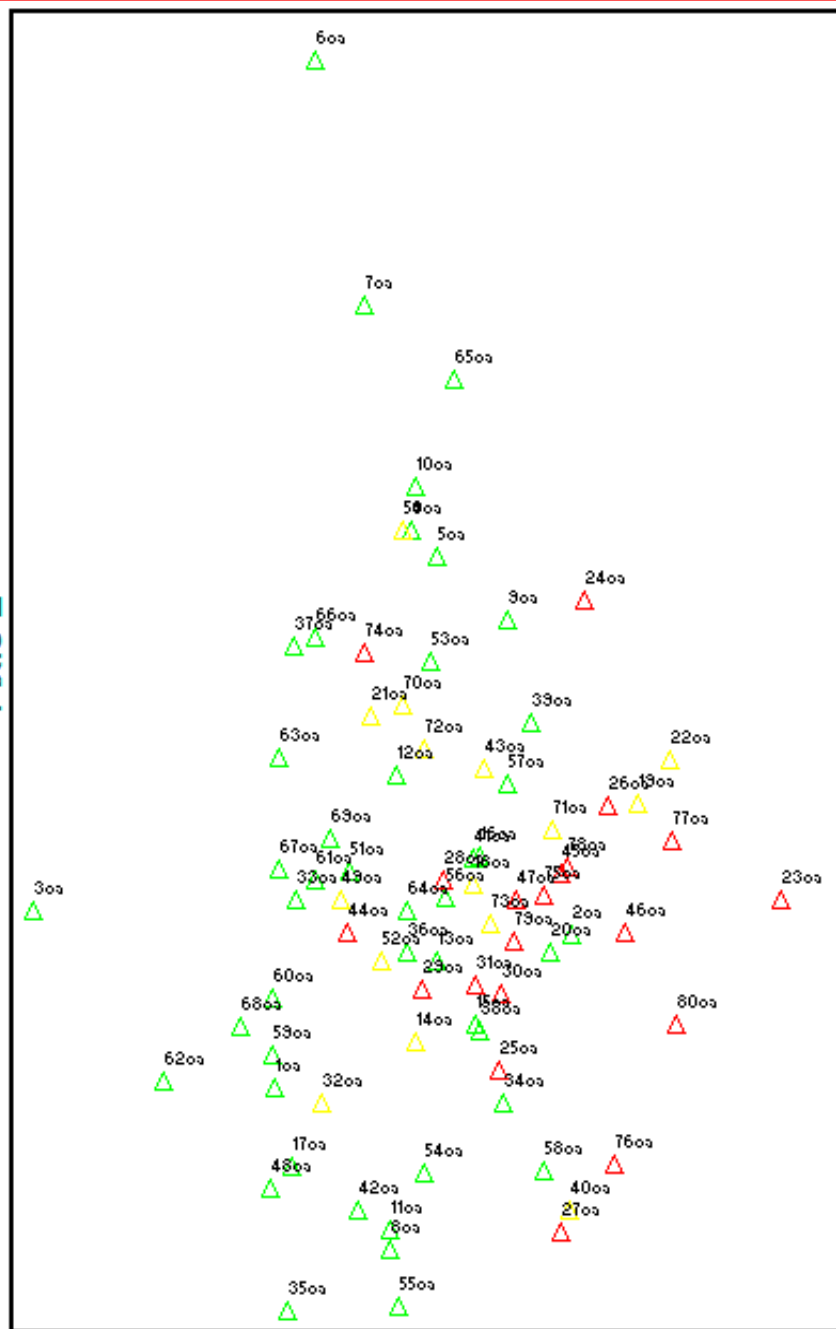
- △ 1
- △ 2
- △ 3

Axis 1

ArbAnd
 Axis 1
 $r = -.660$ $\tau = -.557$
 Axis 2
 $r = -.318$ $\tau = -.178$



Axis 2



Birlikte_jw_uc

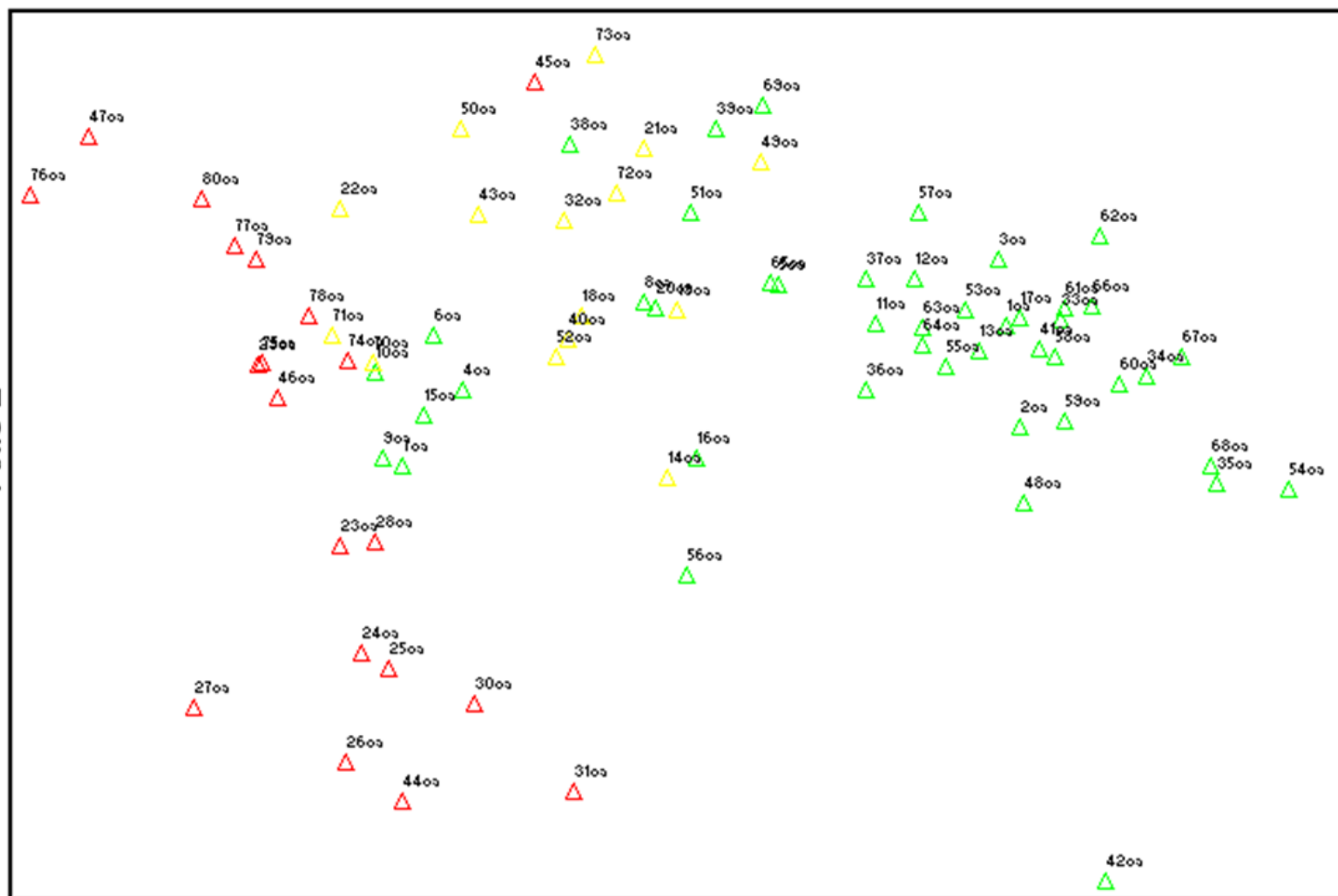
- △ 1
- △ 2
- △ 3

Birliktelik 3 li ayırım

Axis 1

Birlikte_jw_uc

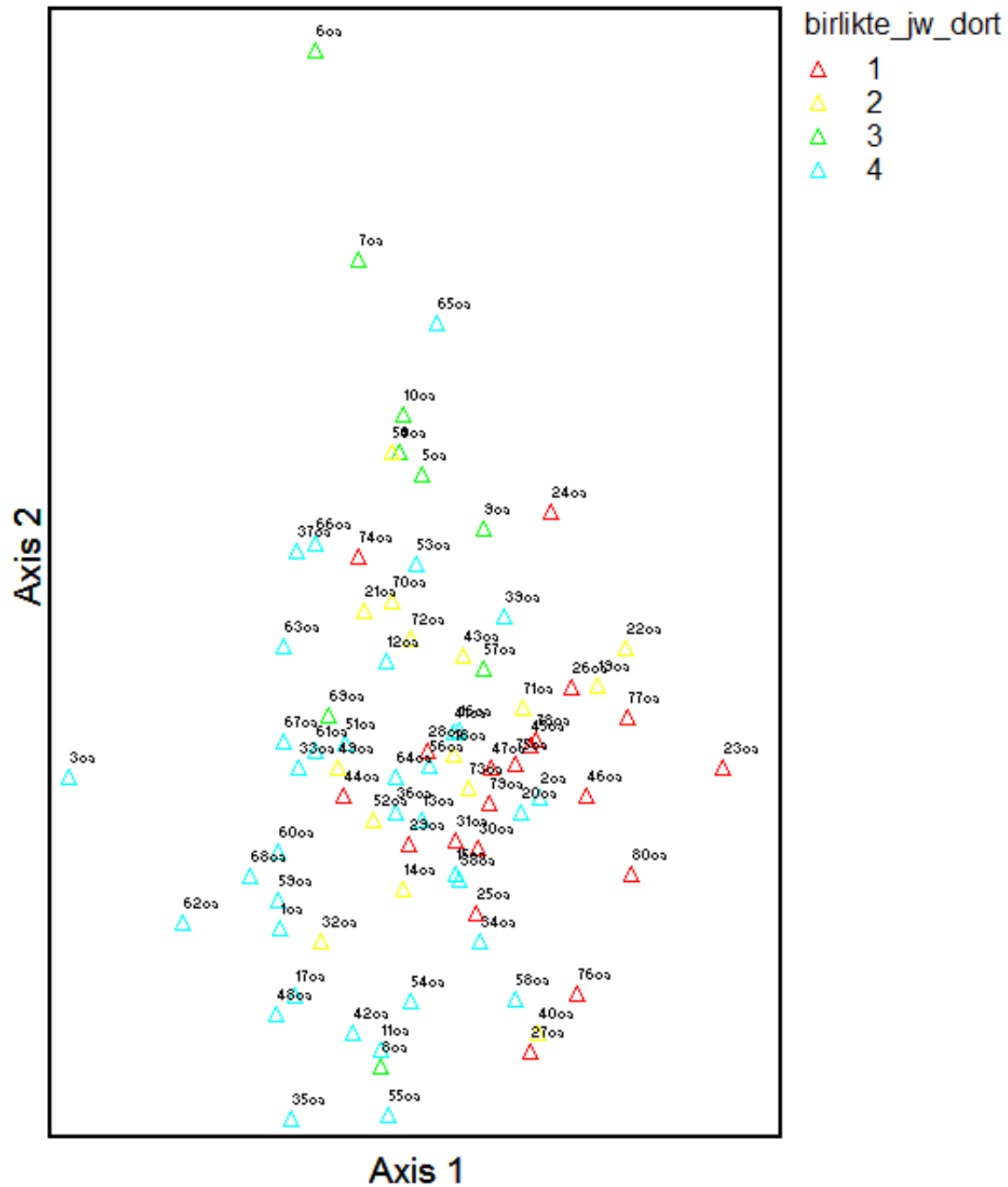
- △ 1
- △ 2
- △ 3



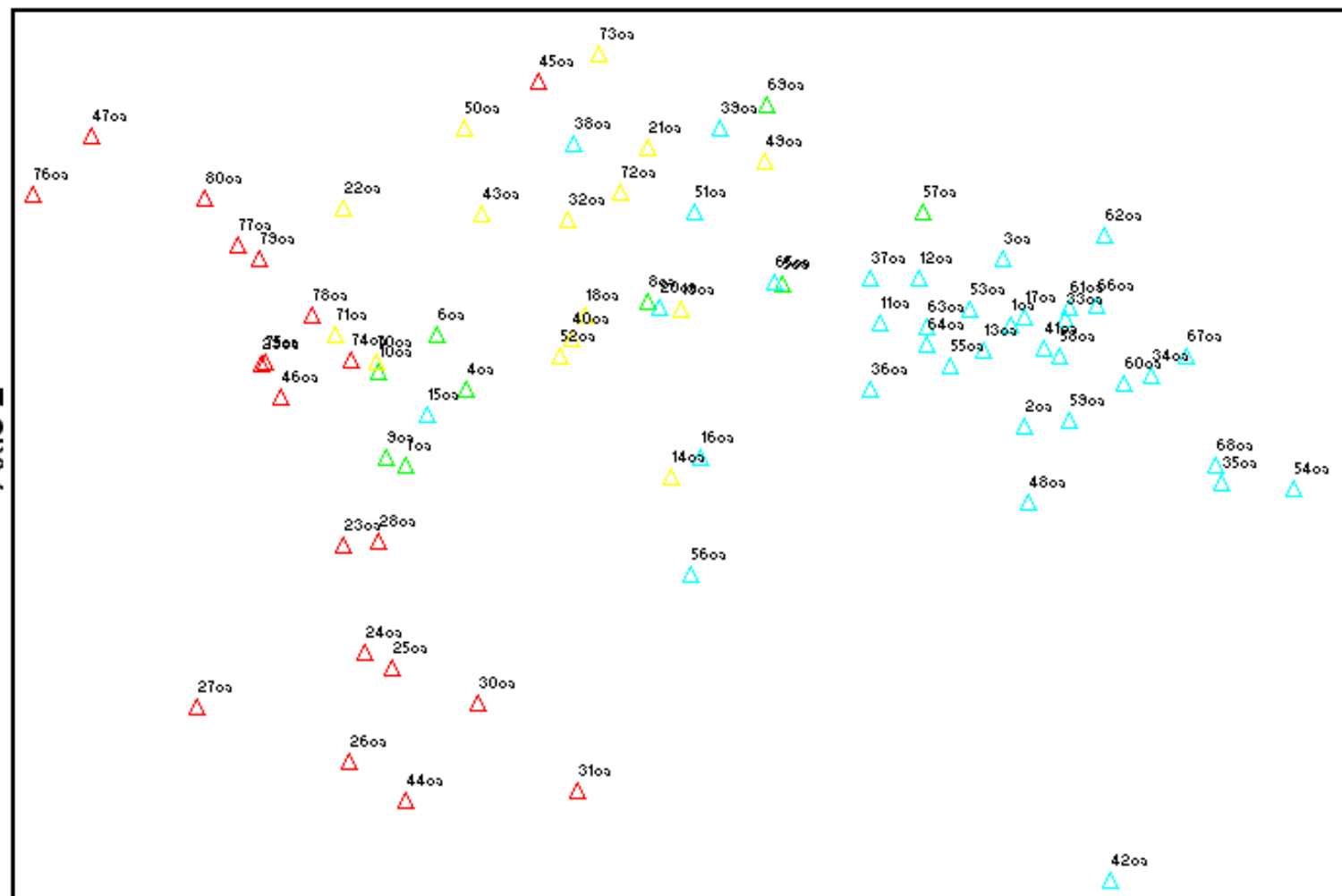
Axis 1

Axis 2

Birliktelik 4 li ayırım



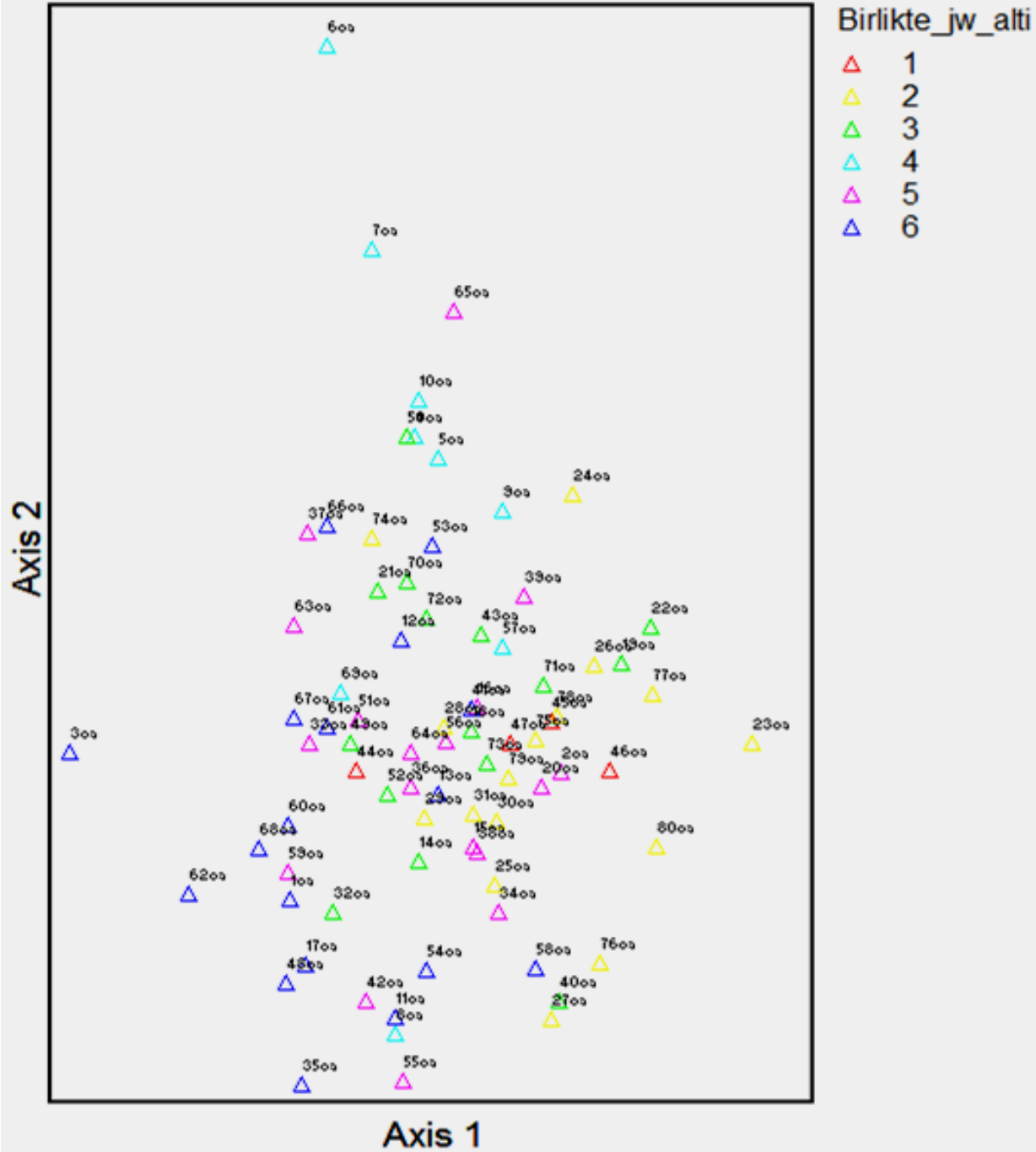
Axis 2



Axis 1

birlikte_jw_dor

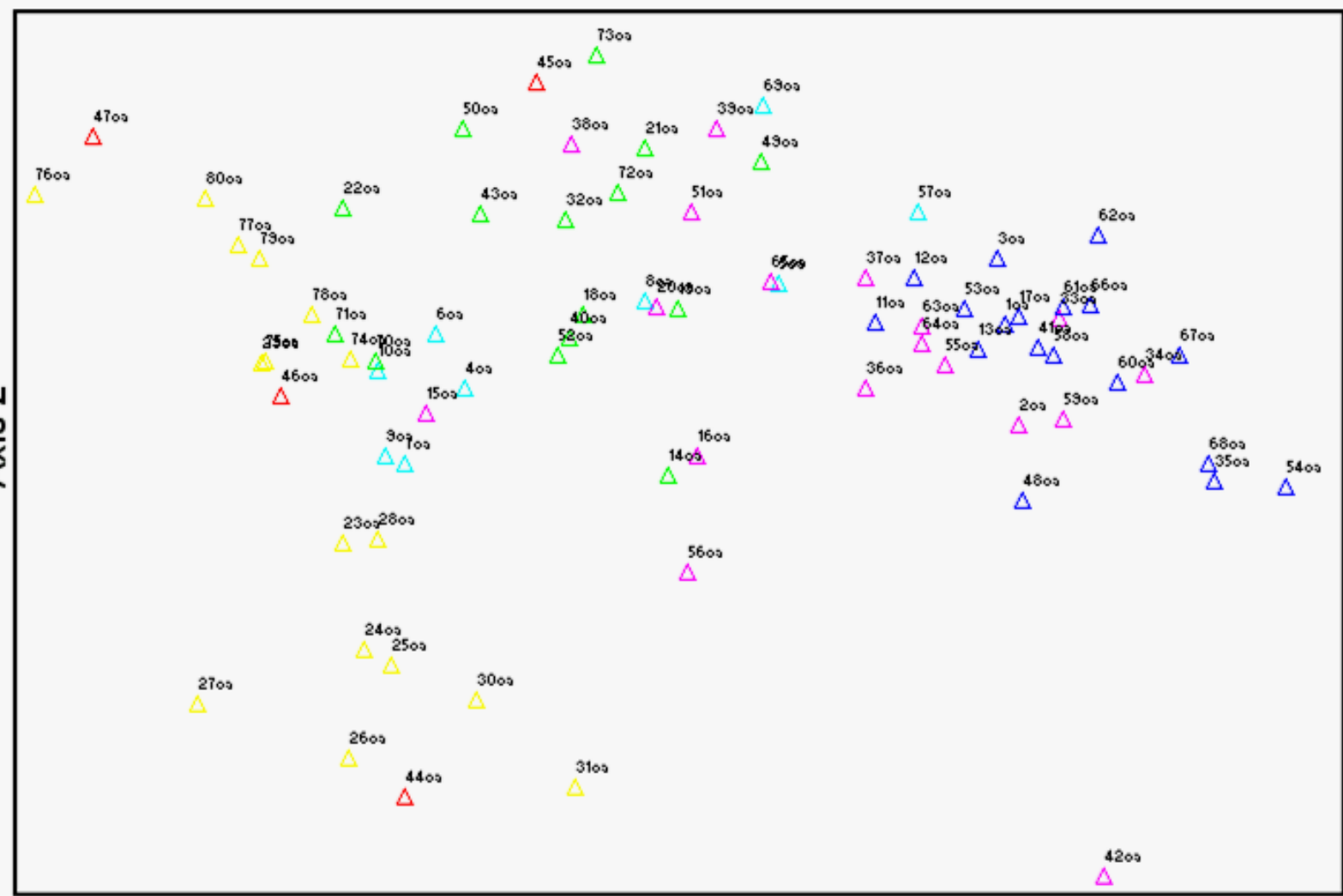
- △ 1
- △ 2
- △ 3
- △ 4



Birliktelik 6 li ayırım

Birlikte_jw_alti

- △ 1
- △ 2
- △ 3
- △ 4
- △ 5
- △ 6



Axis 2

Axis 1



13-19 Ocak 2014/ ANTALYA

TEŞEKKÜRLER

