

## **SUPPLEMENTARY MATERIAL**

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



















**Table summarising the number of samples per surname and control population, their different haplogroup frequencies and STR variance values of the dominant haplogroup**

Surname	N	E1b-M123		E1b-M34		E1b-M35		E1b-M78		E1b-M81		E-M96		G-M201		H-M213		I2-M26		I-M170		J1-M62		J2-M172		J-M304		K-M9		L-M22		P-92R7		R1a-1573		R1b-M269		T-M70	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Aguirre	43	0	0	0	0	0	0	1	0,023	0	0	0	0	2	0,047	0	0	0	0	2	0,047	0	0	2	0,047	0	0	0	0	0	0	0	1	0,023	34	0,791	1	0,023	
Albiol	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0,311	0	0	0	0	0	0	0	0	0	0	0	31	0,689	0	0
Alegre	46	0	0	0	0	0	0	1	0,022	3	0,065	1	0,022	2	0,043	0	0	1	0,022	2	0,043	0	0	0	0	2	0,043	0	0	0	0	0	0	0	0	34	0,739	0	0
Andreu	43	0	0	0	0	0	0	8	0,186	1	0,023	0	0	2	0,047	0	0	4	0,093	2	0,047	0	0	3	0,07	1	0,023	0	0	0	0	0	0	0	22	0,512	0	0	
Ansotegui	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	1	0	0		
Artola	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	1	0	0		
Baigorri	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0,227	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0,773	0	0		
Balaguer	37	0	0	0	0	0	0	1	0,027	1	0,027	2	0,054	10	0,27	0	0	0	0	1	0,027	0	0	2	0,054	1	0,027	0	0	0	0	0	1	0,027	18	0,486	0	0	
Bengochea	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0,032	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0,968	0	0		
Bennasar	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	1	0	0			
Bibiloni	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0,036	0	0	0	0	26	0,929	0	0	0	0	0	0	0	0	0	1	0,036	0	0		
Boluda	20	0	0	0	0	0	0	0	17	0,85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0,15	0	0			
Cadenas	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0,049	0	0	1	0,024	0	0	0	0	0	0	0	0	0	38	0,927	0	0	
Castell	68	0	0	0	0	0	0	0	1	0,015	0	0	1	0,015	0	0	1	0,015	3	0,044	0	0	28	0,412	0	0	0	0	0	0	0	0	0	0	34	0,5	0	0	
Diez	108	1	0,009	0	0	0	0	1	0,009	18	0,167	0	0	7	0,065	0	0	0	0	2	0,019	0	0	8	0,074	1	0,009	0	1	0,009	0	2	0,019	64	0,593	3	0,028		
Fernandez	77	0	0	1	0,013	0	0	3	0,039	5	0,065	0	0	5	0,065	1	0,013	2	0,026	6	0,078	0	0	2	0,026	4	0,052	0	0	0	1	0,013	1	0,013	45	0,584	1	0,013	
Gordon	43	0	0	0	0	0	0	3	0,07	0	0	0	0	0	0	0	0	0	10	0,233	0	0	1	0,023	0	0	0	0	0	0	1	0,023	25	0,581	3	0,07			
Granell	53	0	0	0	0	0	0	3	0,057	1	0,019	0	0	4	0,075	0	0	0	0	3	0,057	0	0	0	0	0	0	0	0	0	0	0	0	42	0,792	0	0		
Herrero	49	0	0	1	0,02	0	0	1	0,02	2	0,041	0	0	3	0,061	0	0	2	0,041	3	0,061	4	0,082	4	0,082	0	0	0	0	0	0	0	0	29	0,592	0	0		
Huguet	37	1	0,027	0	0	0	0	0	0	1	0,027	0	0	3	0,081	0	0	1	0,027	0	0	0	1	0,027	1	0,027	0	0	0	0	0	0	0	29	0,784	0	0		
Ibarra	42	0	0	0	0	0	0	1	0,024	1	0,024	0	0	0	0	0	0	1	0,024	2	0,048	0	0	2	0,048	0	0	0	0	0	1	0,024	1	0,024	33	0,786	0	0	
Japon	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0,045	0	0	0	0	0	3	0,136	0	0	18	0,818	0	0		
Juarez	55	1	0,018	2	0,036	1	0,018	1	0,018	2	0,036	0	0	0	0	0	3	0,055	3	0,055	0	0	3	0,055	3	0,055	0	0	0	0	0	1	0,018	34	0,618	1	0,018		
Marques	51	0	0	2	0,039	0	0	3	0,059	2	0,039	1	0,02	4	0,078	0	0	3	0,059	3	0,059	0	0	0	0	0	0	0	0	0	0	1	0,02	32	0,627	0	0		
Martinez	114	0	0	1	0,009	0	0	2	0,018	1	0,009	2	0,018	6	0,053	0	0	2	0,018	6	0,053	0	0	7	0,061	2	0,018	0	1	0,009	0	0	0	81	0,711	3	0,026		
Mateos	66	0	0	1	0,015	0	0	2	0,03	4	0,061	0	0	6	0,091	0	0	0	0	3	0,045	0	0	3	0,045	0	0	0	0	2	0,03	7	0,106	38	0,576	0	0		
Moliner	65	0	0	0	0	0	0	2	0,031	4	0,062	6	0,092	1	0,015	0	0	14	0,215	0	0	0	2	0,031	0	0	0	0	0	2	0,031	34	0,523	0	0				
Nortes	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	1	0	0			
Olaizola	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0,025	0	0	39	0,975	0	0				
Pascual	41	0	0	0	0	1	0,024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0,049	0	0	0	0	0	0	0	0	0	0	38	0,927	0	0		
Quevedo	42	0	0	0	0	0	0	1	0,024	5	0,119	1	0,024	0	0	0	0	2	0,048	0	0	0	8	0,19	1	0,024	0	0	0	0	0	0	0	24	0,571	0	0		
Renau	53	0	0	0	0	0	0	0	0	0	0	0	0	1	0,019	0	0	2	0,038	2	0,038	0	0	0	1	0,019	0	0	0	0	0	0	0	47	0,887	0	0		
Ribalta	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0,136	0	0	0	0	0	12	0,273	0	0	0	0	0	0	0	0	26	0,591	0	0		
Rubio	93	0	0	2	0,022	2	0,022	2	0,022	3	0,032	0	0	1	0,011	0	0	1	0,011	4	0,043	0	0	10	0,108	3	0,032	0	0	0	0	0	0	64	0,688	1	0,011		
Tirado	39	0	0	1	0,026	0	0	4	0,103	1	0,026	0	0	1	0,026	0	0	1	0,026	1	0,026	0	0	5	0,128	1	0,026	0	0	0	1	0,026	0	22	0,564	1	0,026		
Valbuena	57	0	0	1	0,018	0	0	1	0,018	0	0	0	0	2	0,035	0	0	0	0	0	0	0	2	0,035	0	0	0	0	0	0	1	0,018	45	0,789	5	0,088			
Villaruel	61	0	0	0	0	0	0	4	0,066	8	0,131	0	0	0	0	0	16	0,262	0	0	0	0	5	0,082	1	0,016	0	0	0	0	1	0,016	26	0,426	0	0			
Controls	355	0	0	10	0,095	0	0	9	0,067	11	0,083	0	0	6	0,066	1	0,006	11	0,08	12	0,096	0	0	19	0,173	8	0,075	1	0,013	1	0,013	2	0,019	14	0,118	241	2,013	9	0,083
Total	2121	3	0,001	22	0,01	4	0,002	54	0,025	92	0,043	13	0,006	67	0,032	2	9E-04	80	0,038	72	0,034	4	0,002	161	0,076	42	0,02	1	5E-04	3	0,001	11	0,005	34	0,016	1428	0,673	28	0,013

## MEDIAN-JOINING NETWORKS

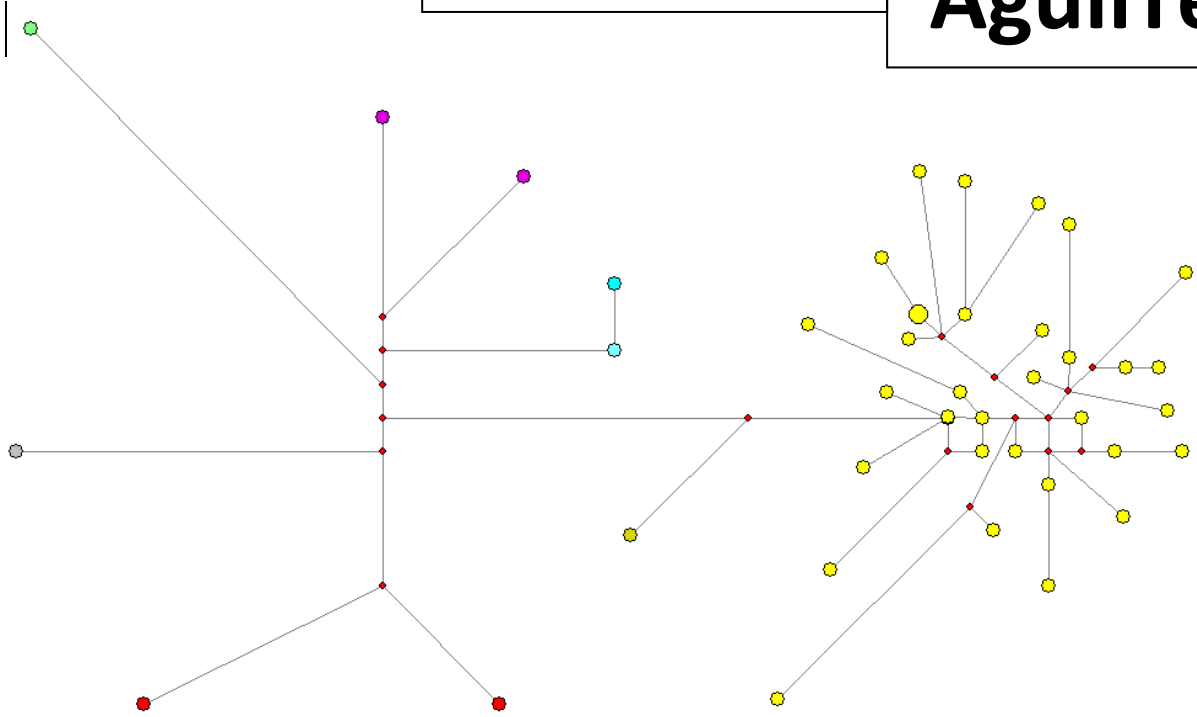
NETWORKS OF SPANISH SURNAMES BASED ON SNPs AND 15 STRs, SHOWING ALL DESCENT CLUSTERS (IN ALPHABETICAL ORDER).

(Networks of the Spanish control samples are located at the end)

<u>Haplogroups</u>			
 A*	 I2-M26	 E1b-M81	 G-M201
 R1b-M269	 I-M170	 E1b-M78	 H-M213
 J1-M62	 R1a-1532	 E1b-M34	 K-M9
 J2-M172	 T-M70	 E-M96	 L-M22
 J-M304	 E1b-M123	 E1b-M35	 P-92R7

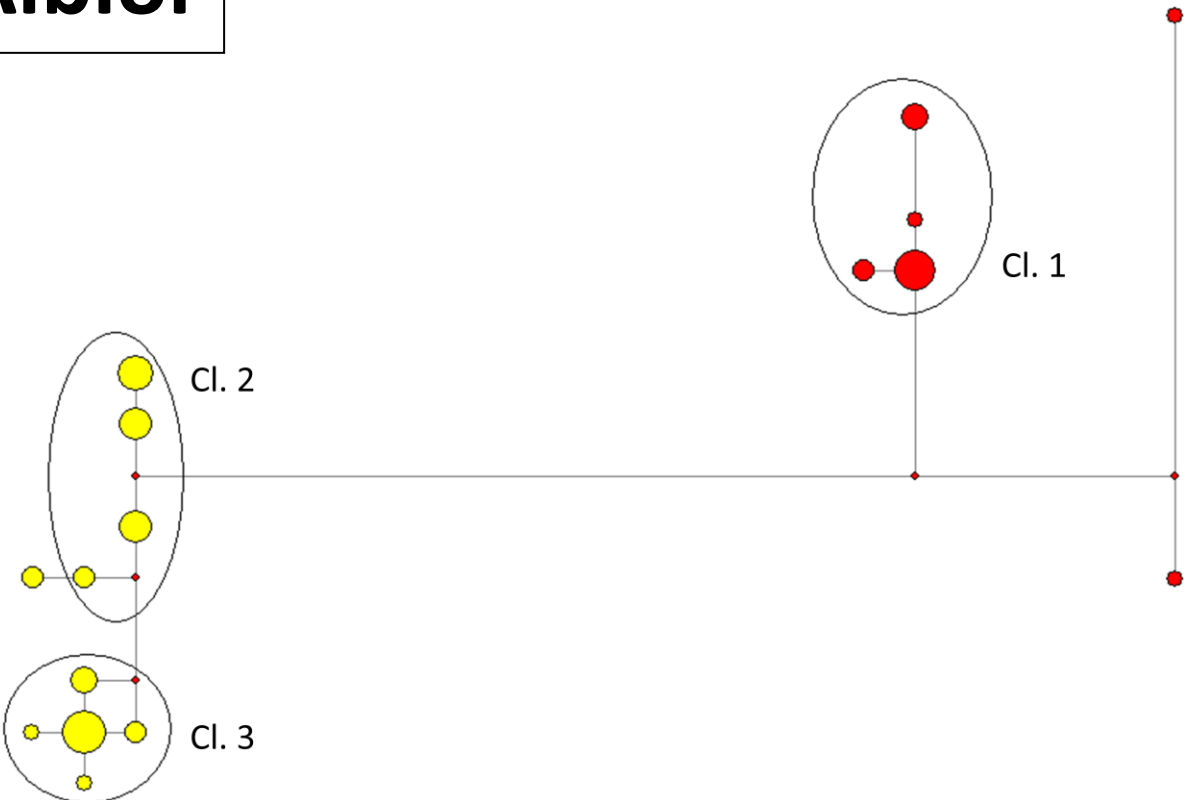
Category: Frequent

**Aguirre**



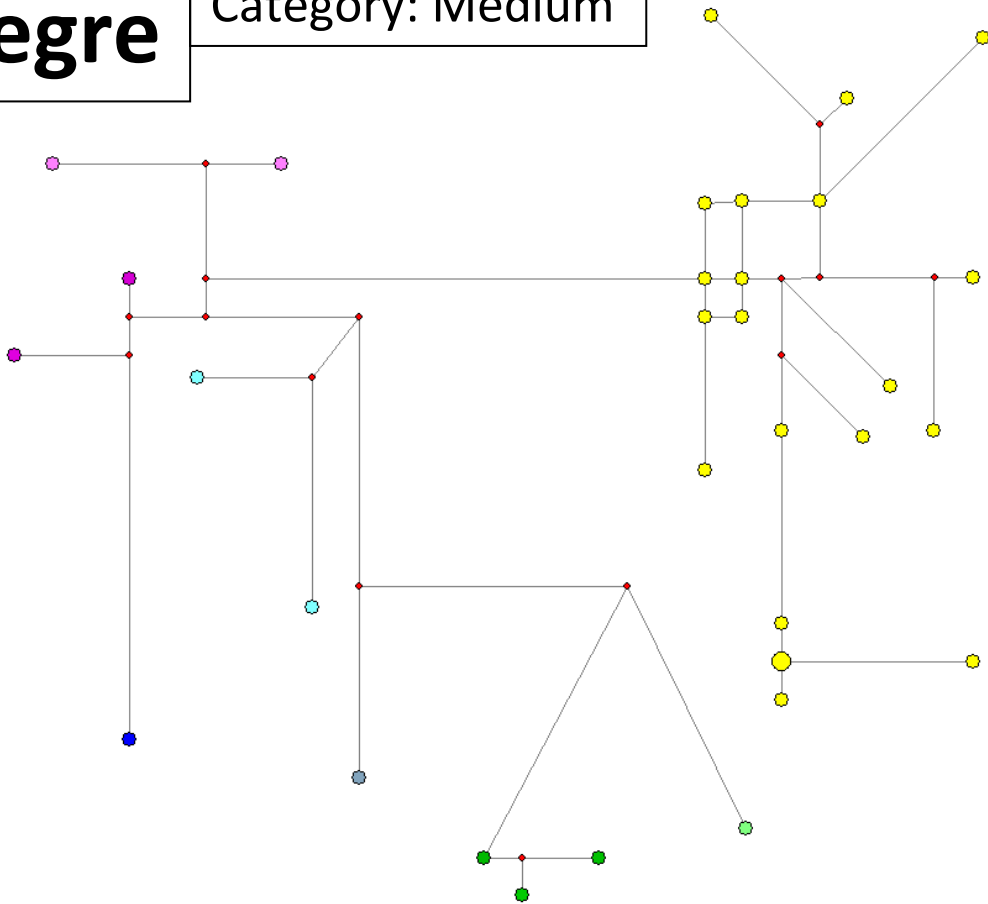
**Albiol**

Category: Very Rare



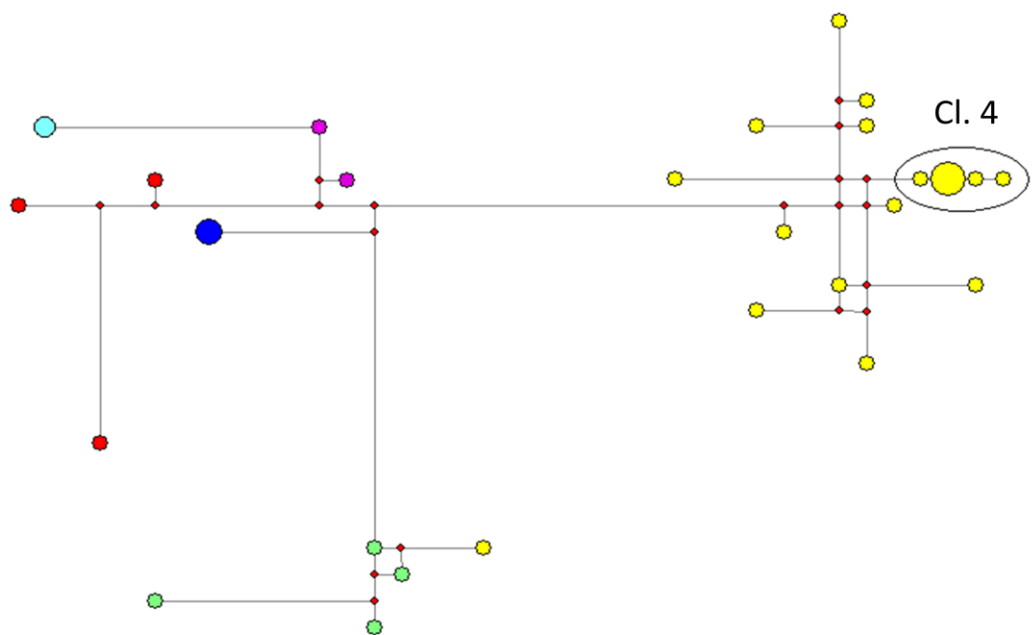
# Alegre

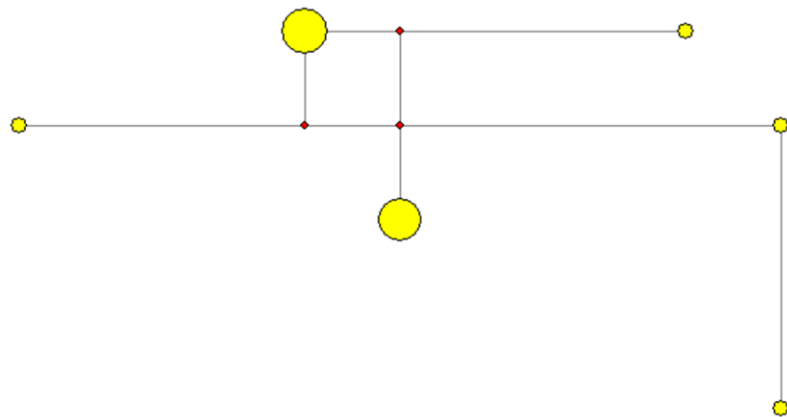
Category: Medium



# Andreu

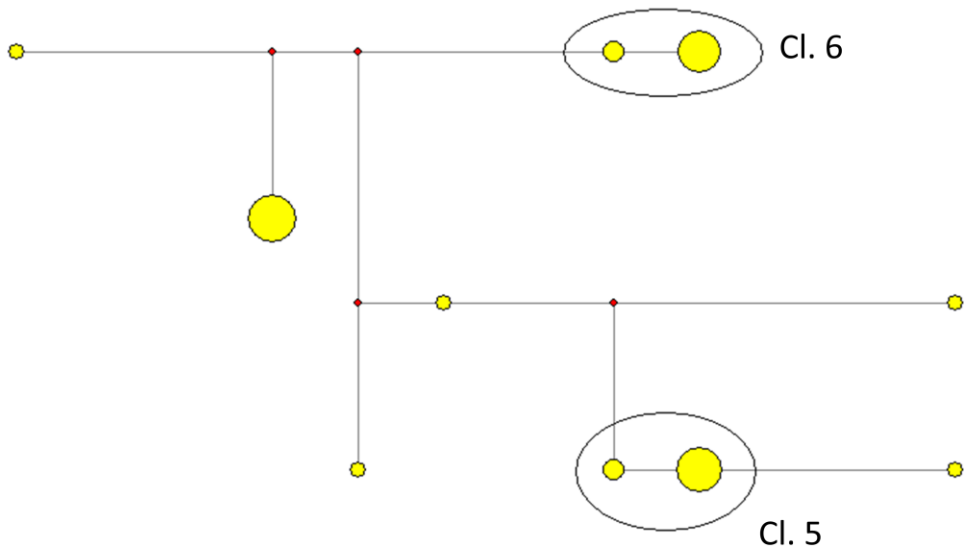
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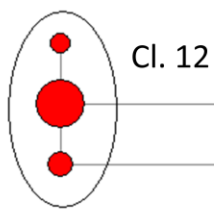
Category: Very Rare

# Ansotegui / Ansuategui



# Artola

Category: Very Rare

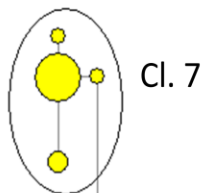


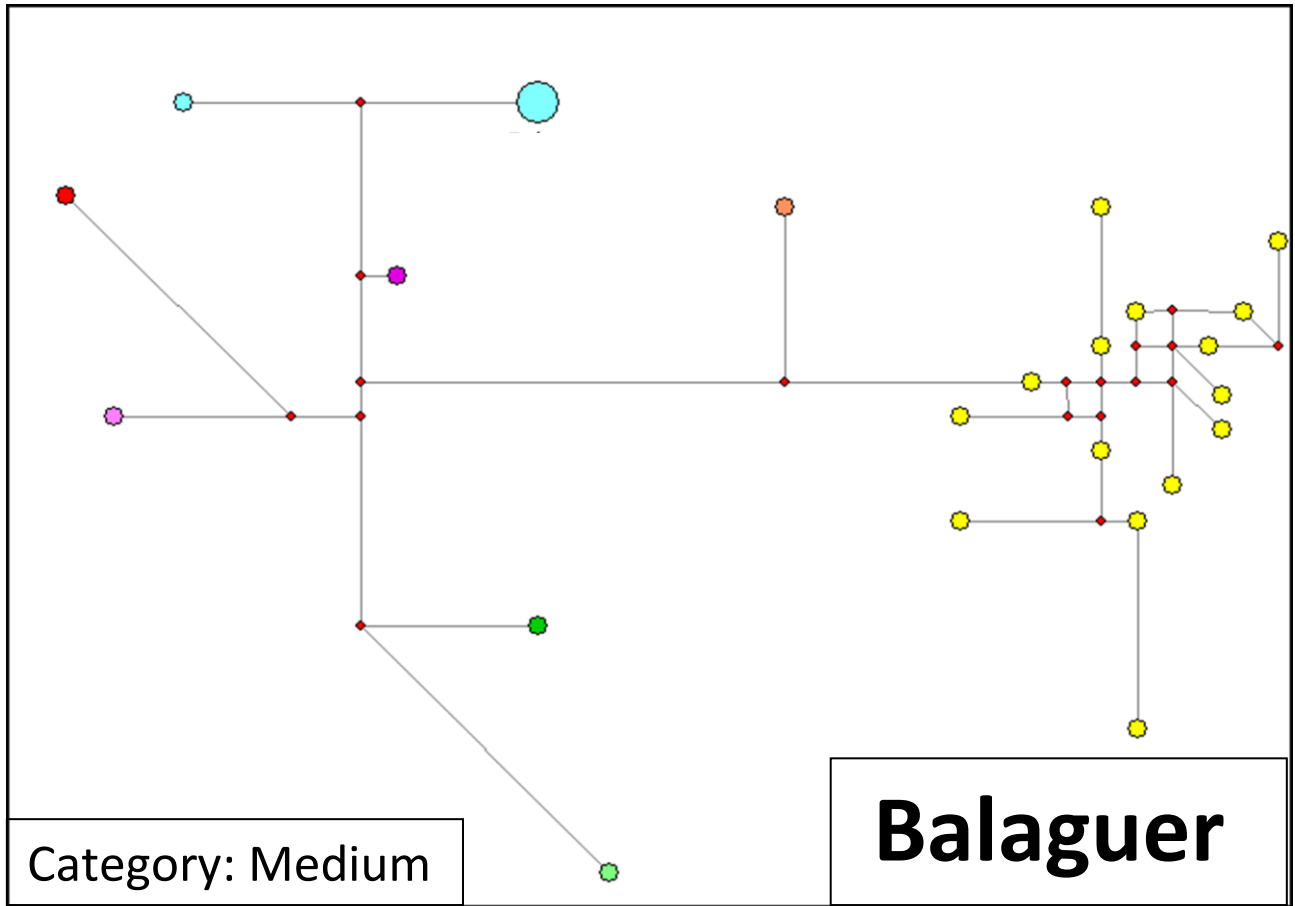
Category: Very Rare

# Babiloni / Bibiloni

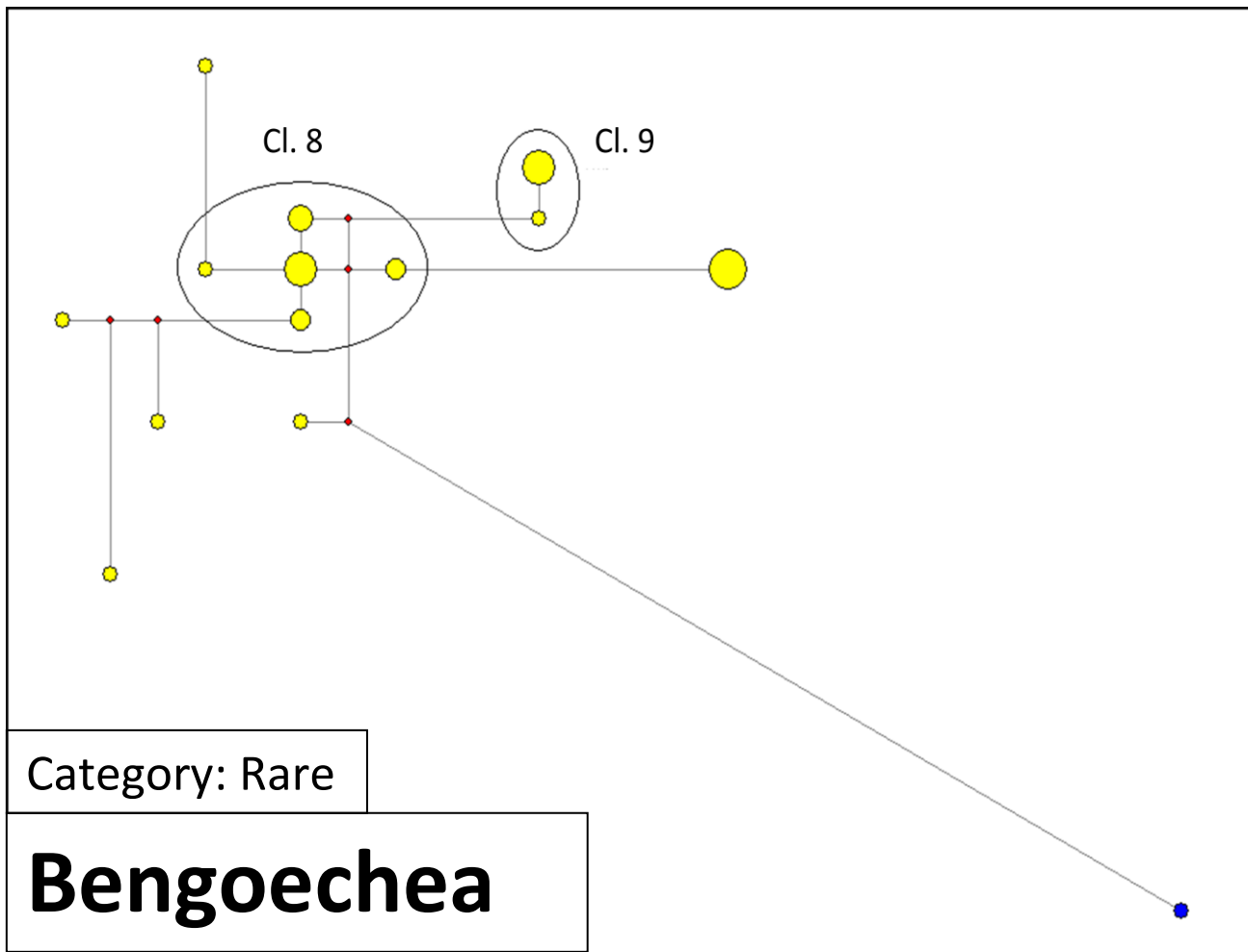
Category: Very Rare

# Baigorri





**Balaguer**

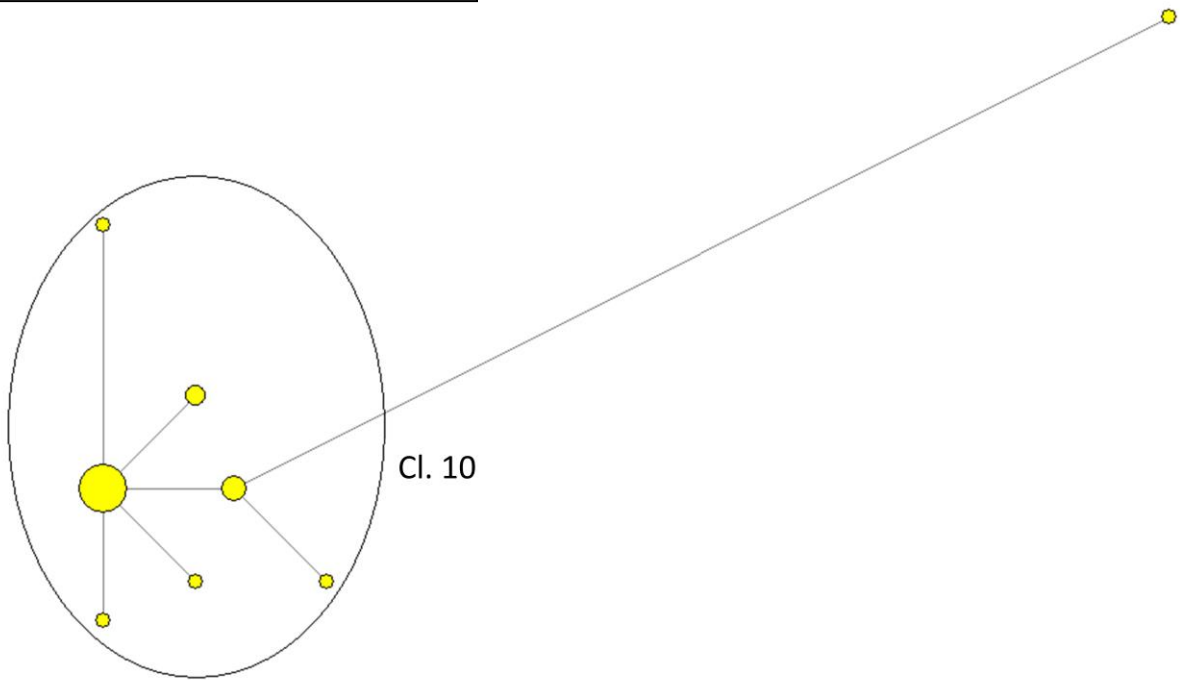


**Bengoechea**



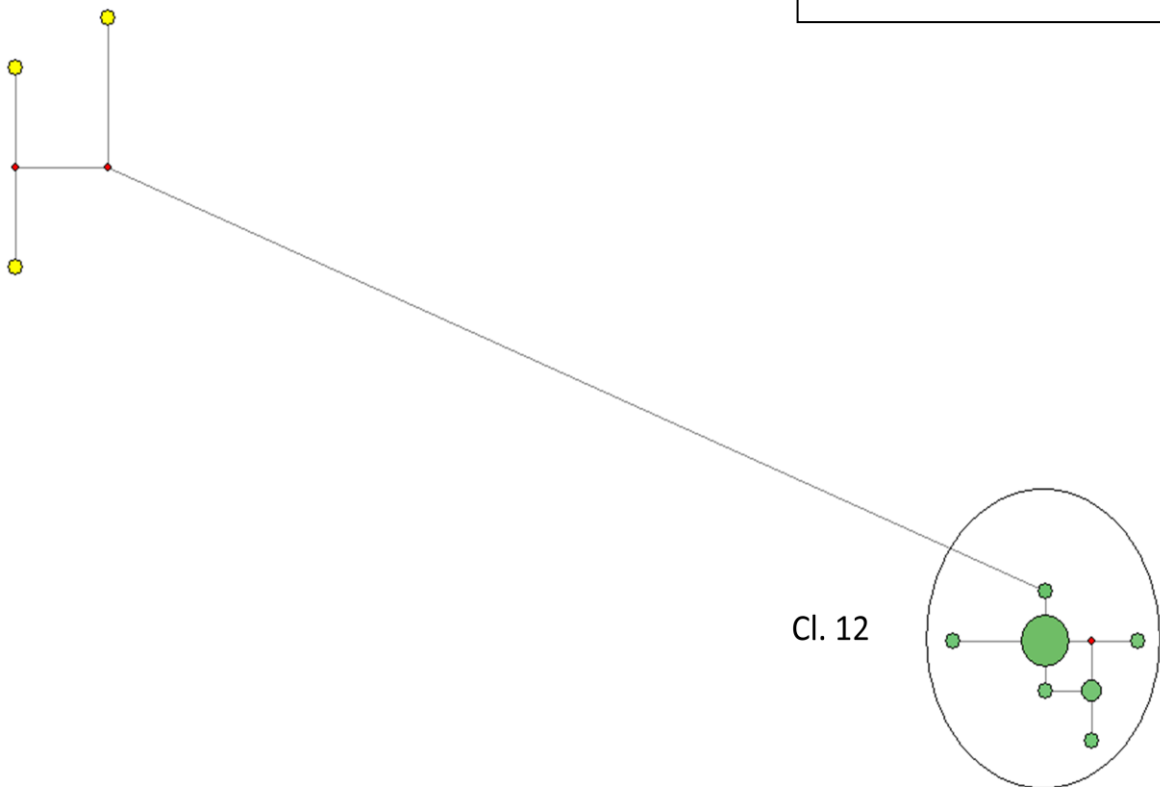
# Bennasar

Category: Very Rare



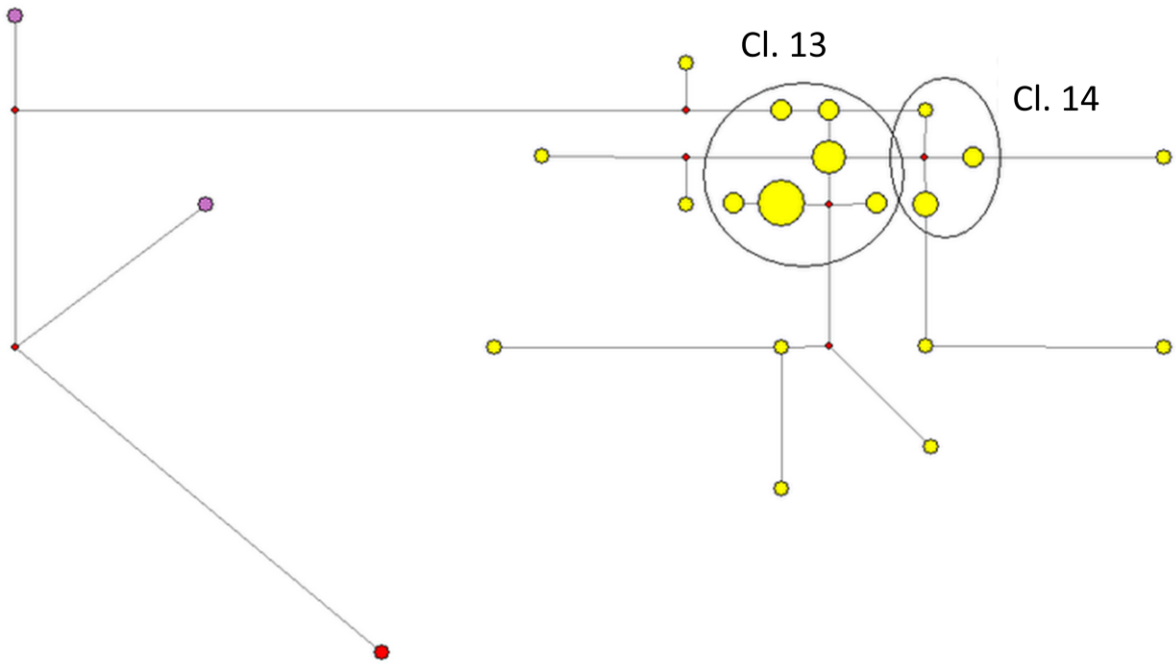
Category: Very Rare

# Boluda



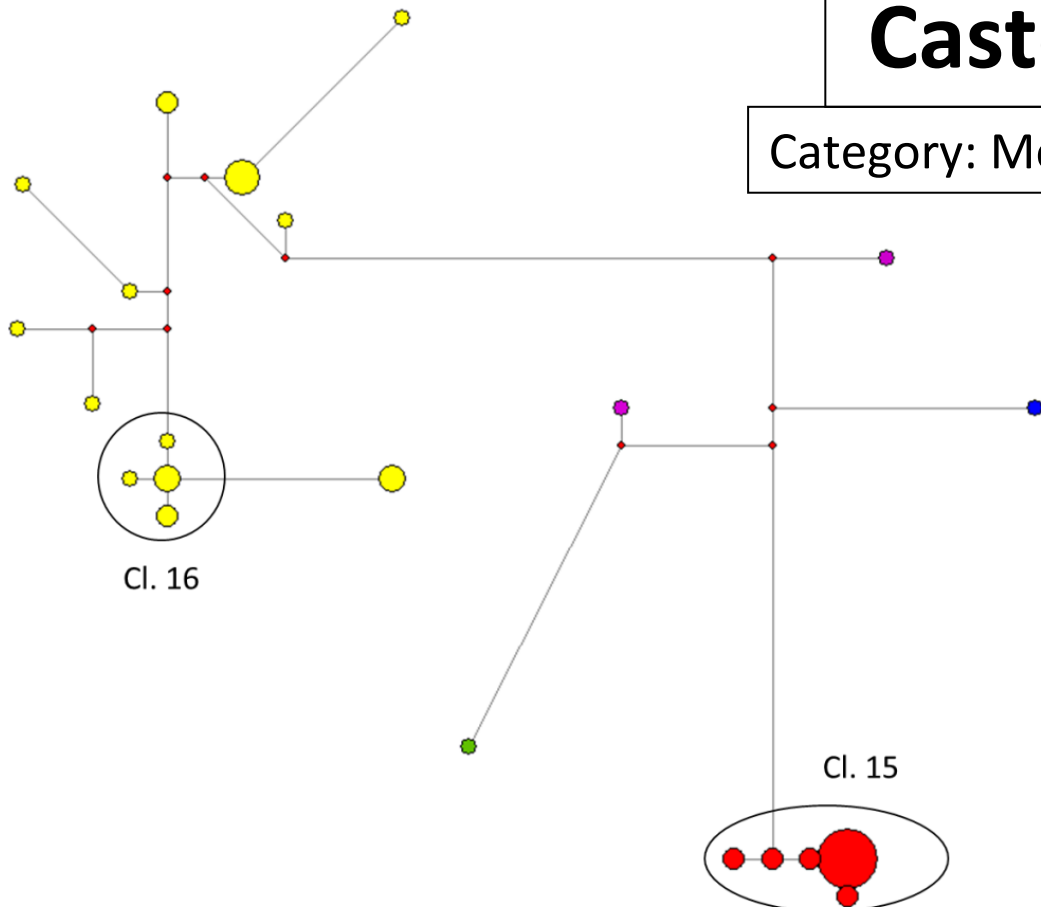
Category: Rare

# Cadenas



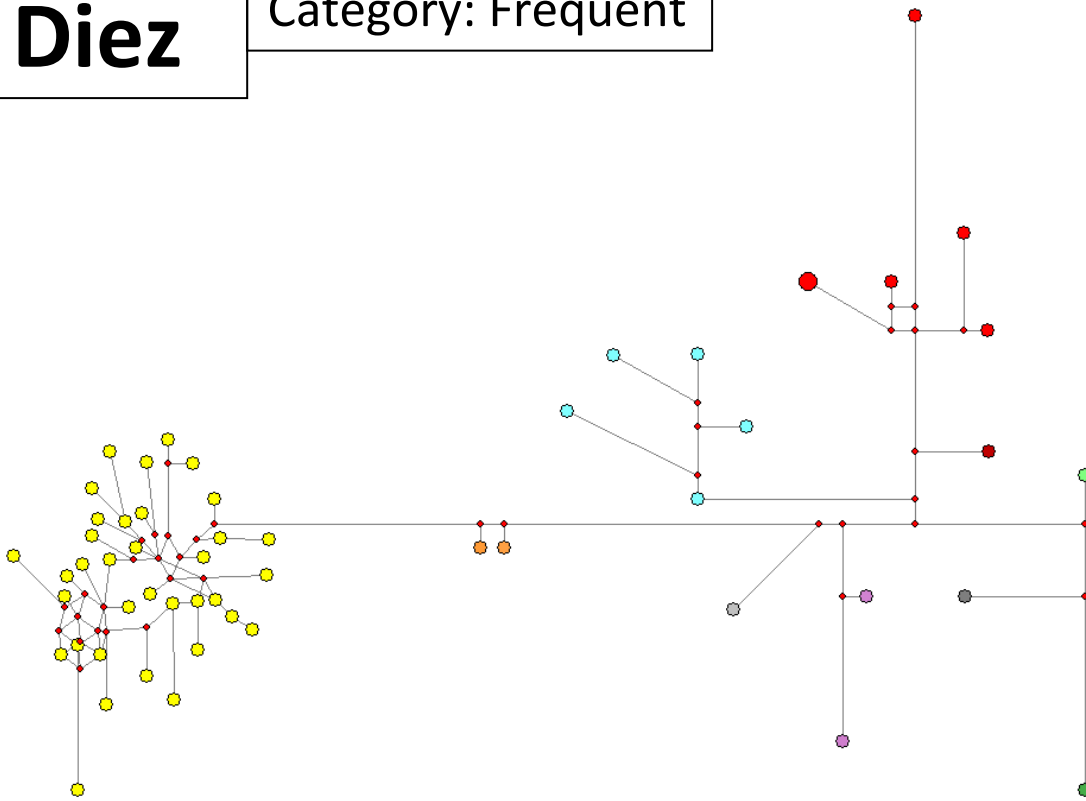
# Castell

Category: Medium



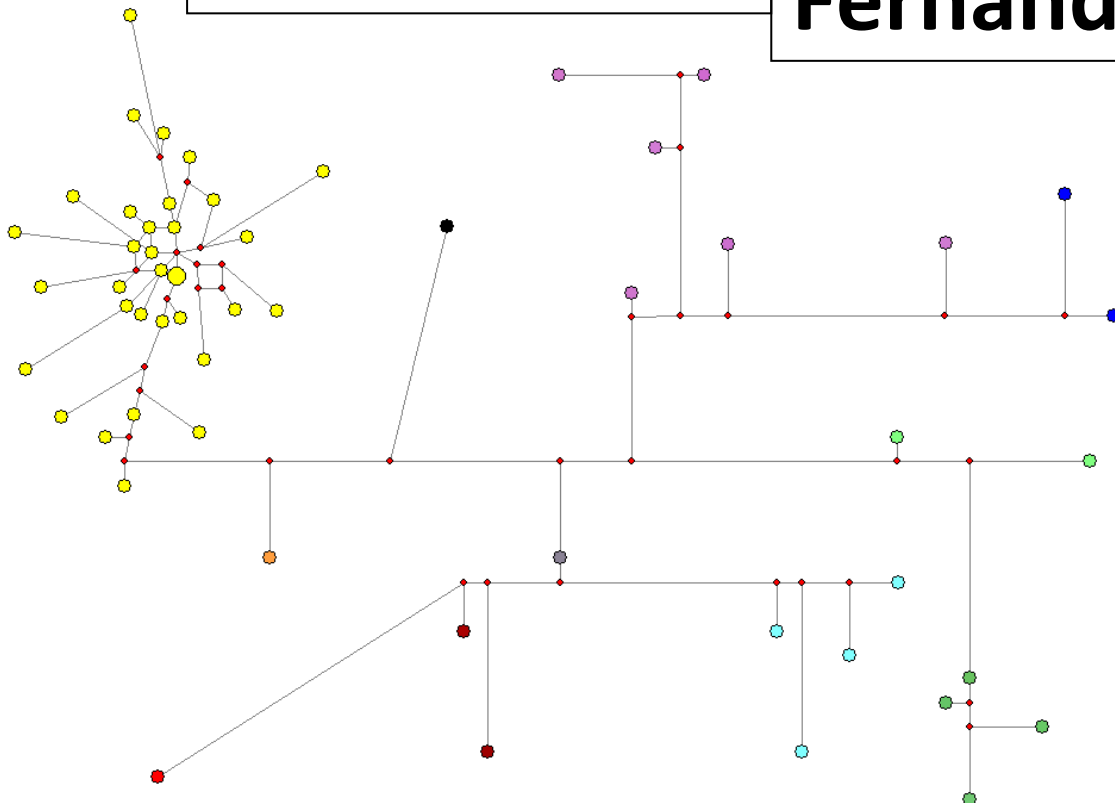
**Diez**

Category: Frequent



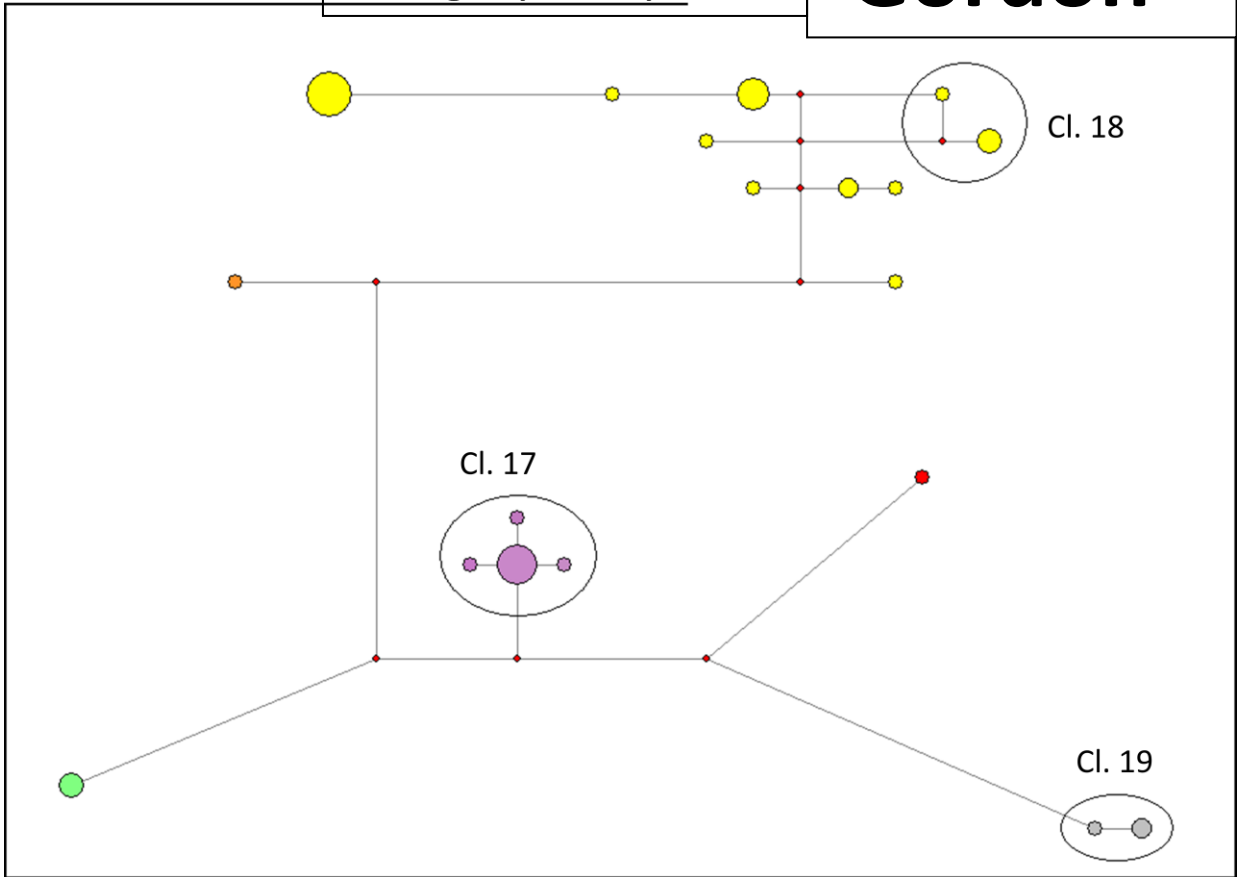
Category: Extr. Frequent

**Fernandez**



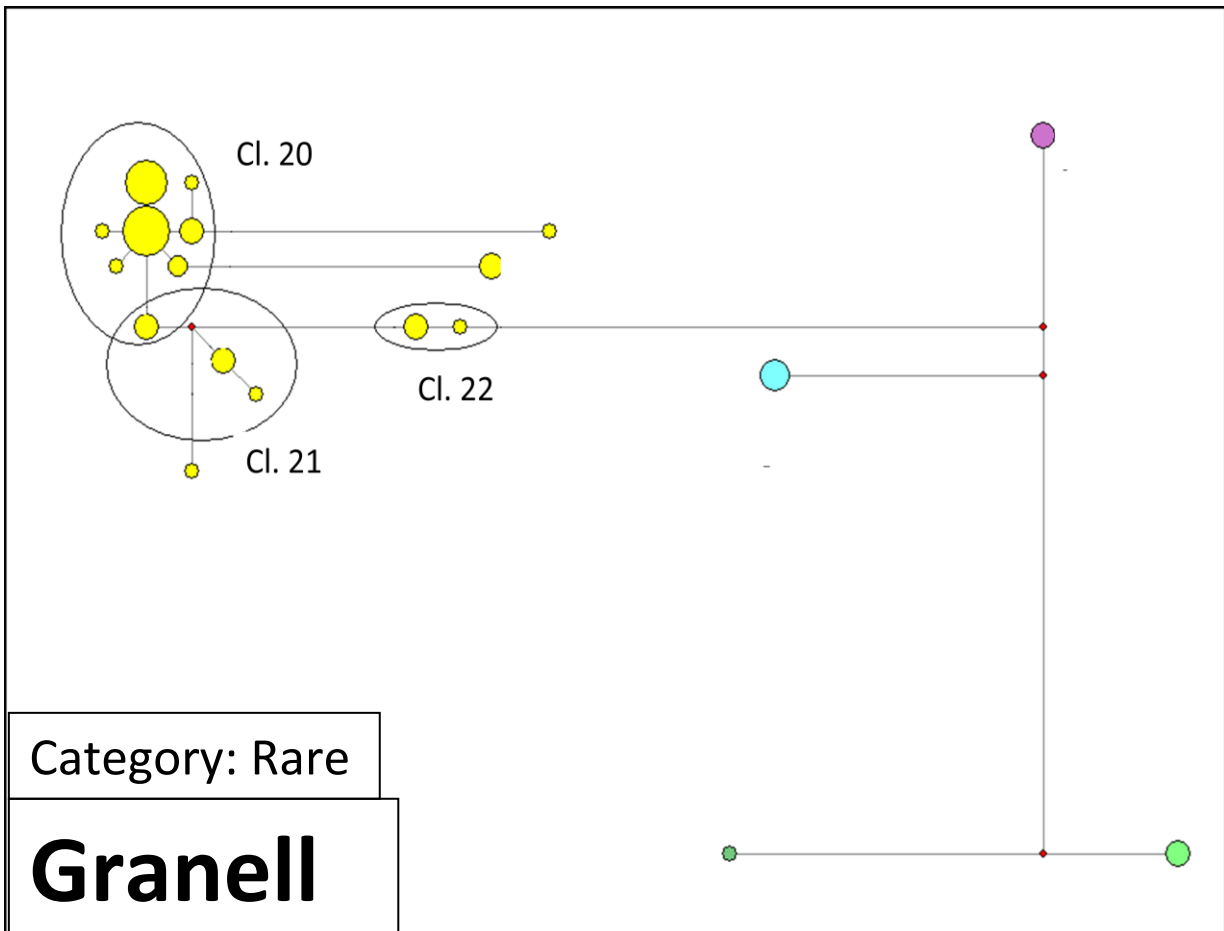
Category: Very Rare

# Gordon



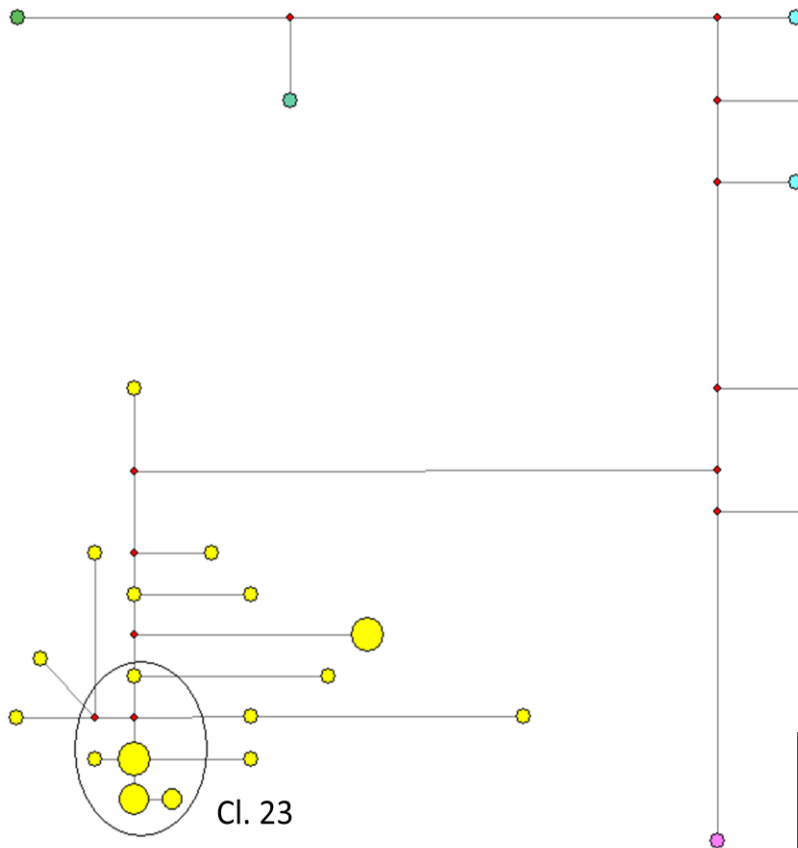
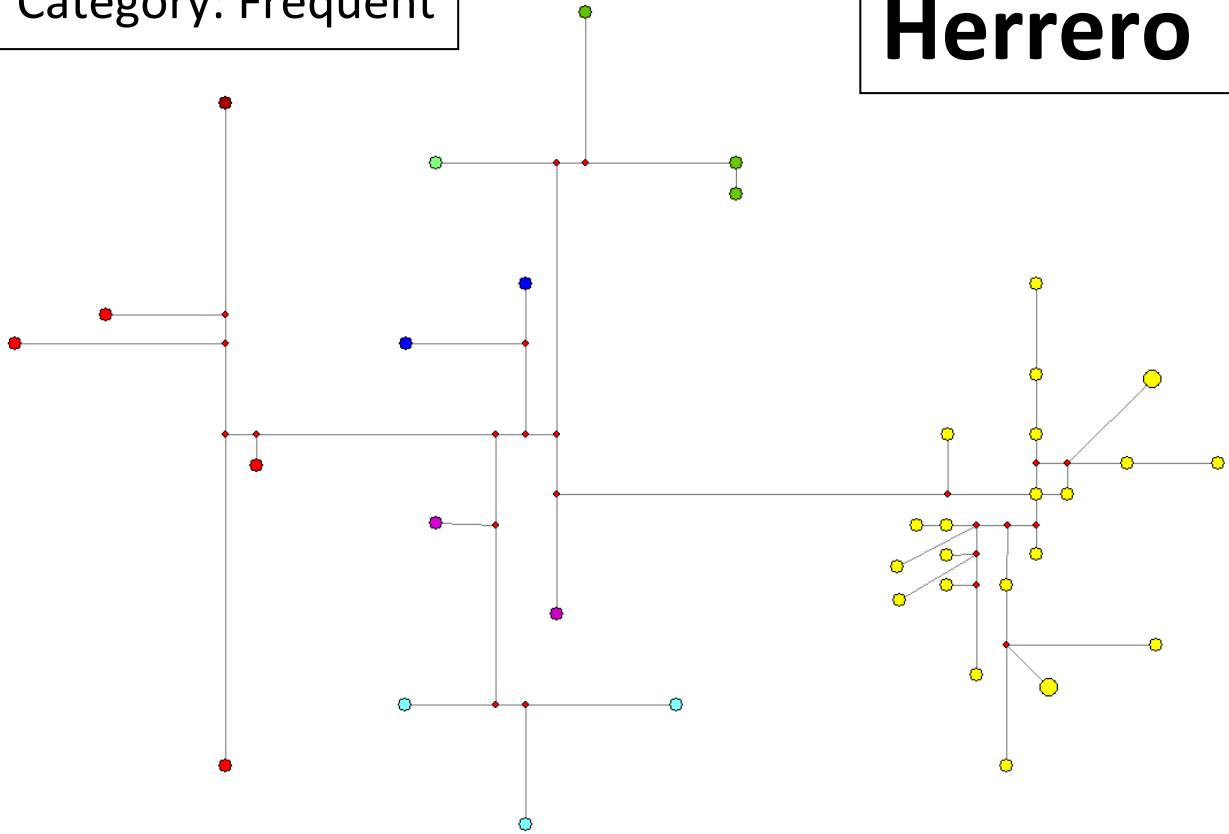
Category: Rare

# Granell



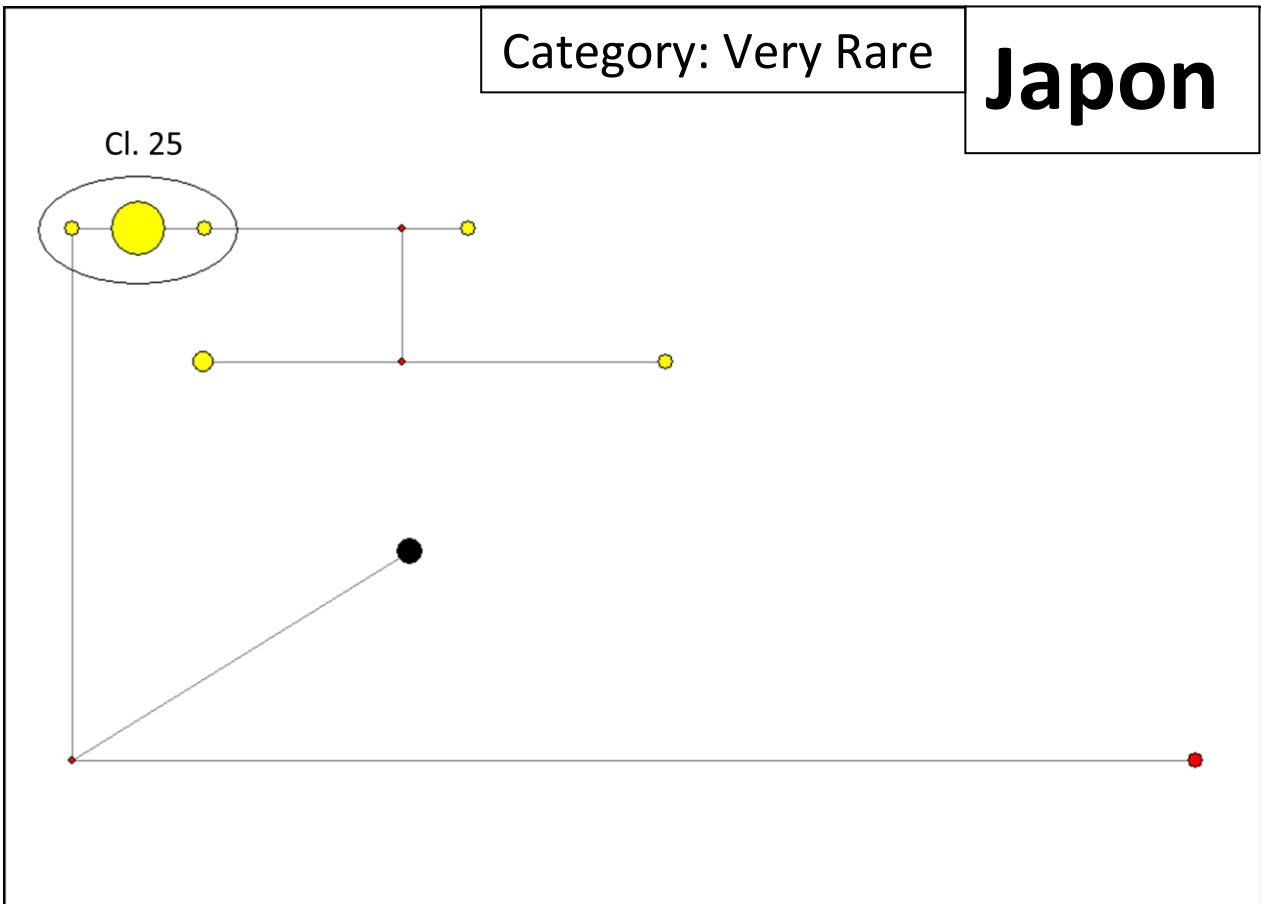
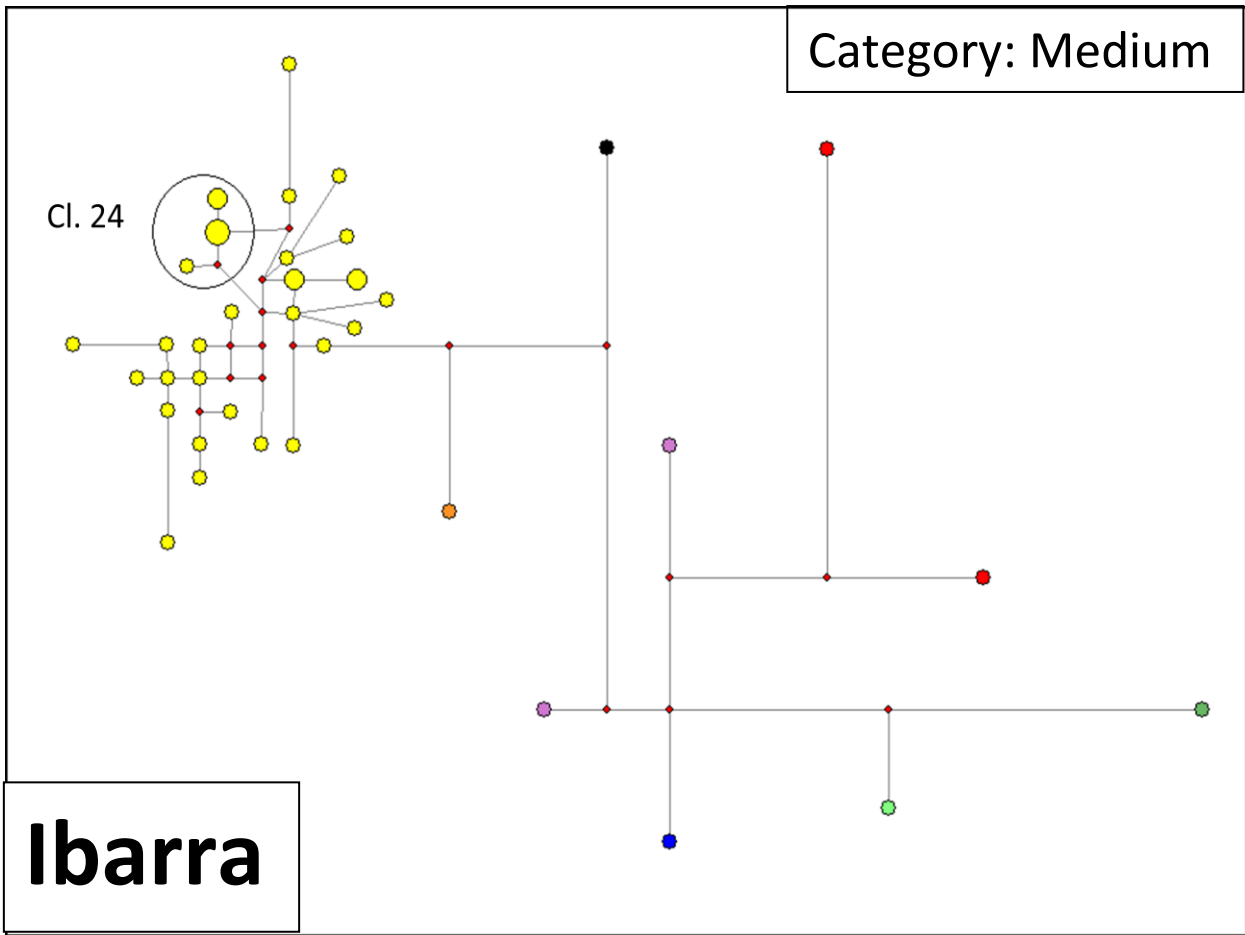
Category: Frequent

**Herrero**



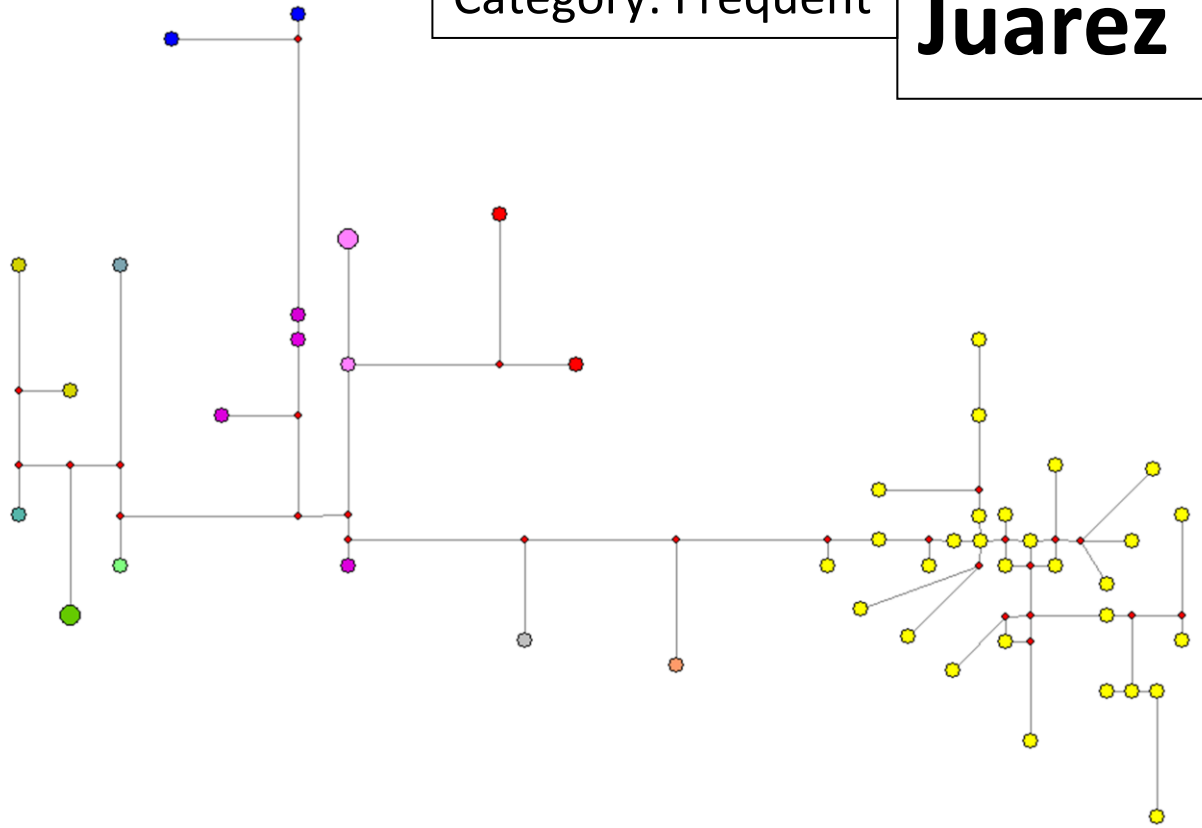
Category: Rare

**Huguet**

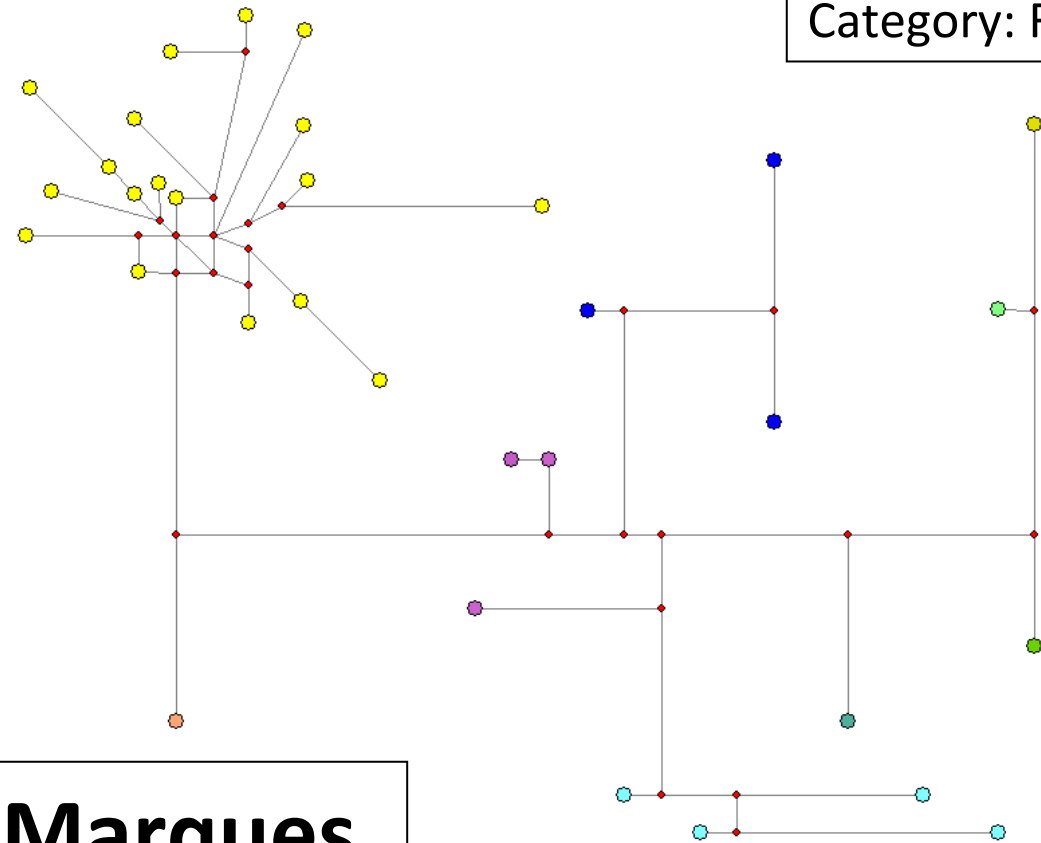


Category: Frequent

**Juarez**



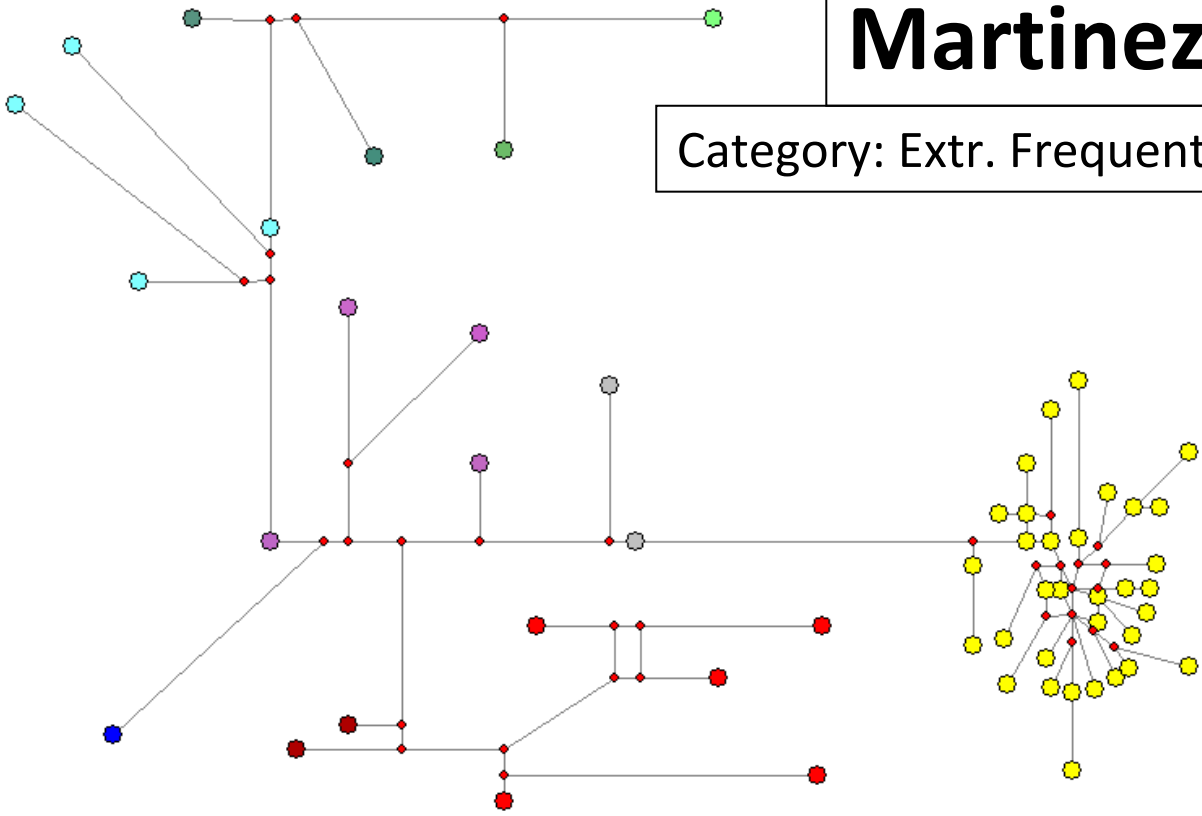
Category: Frequent



**Marques**

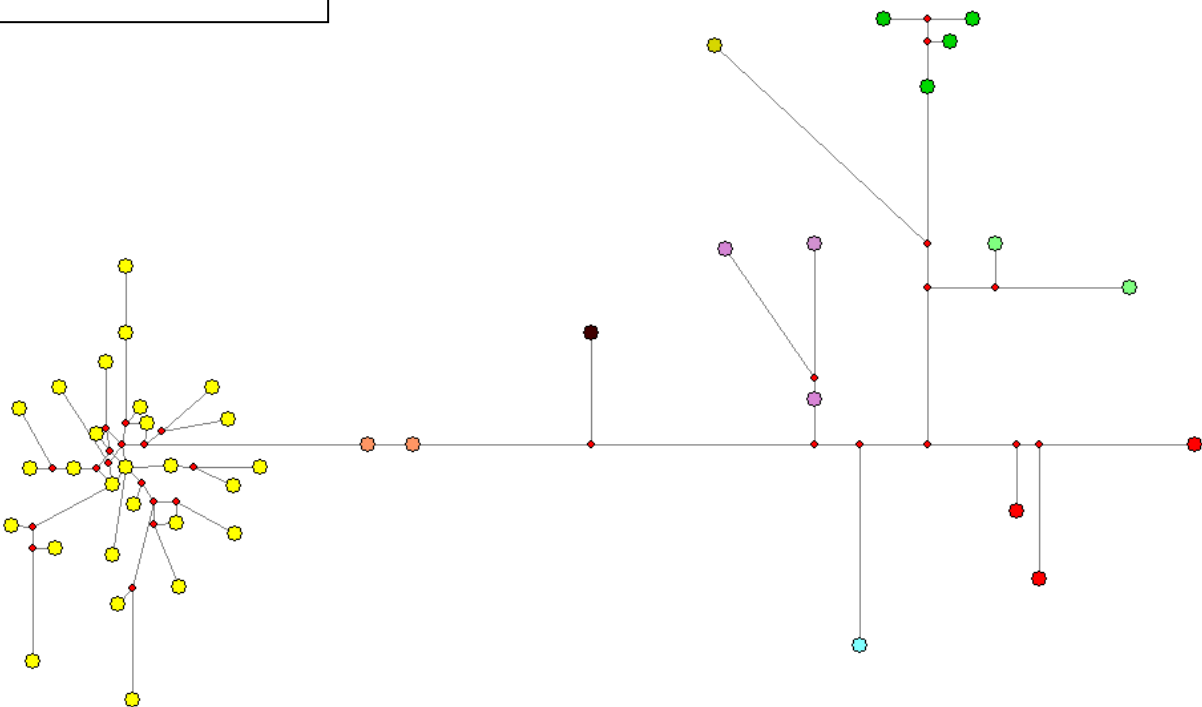
# Martinez

Category: Extr. Frequent

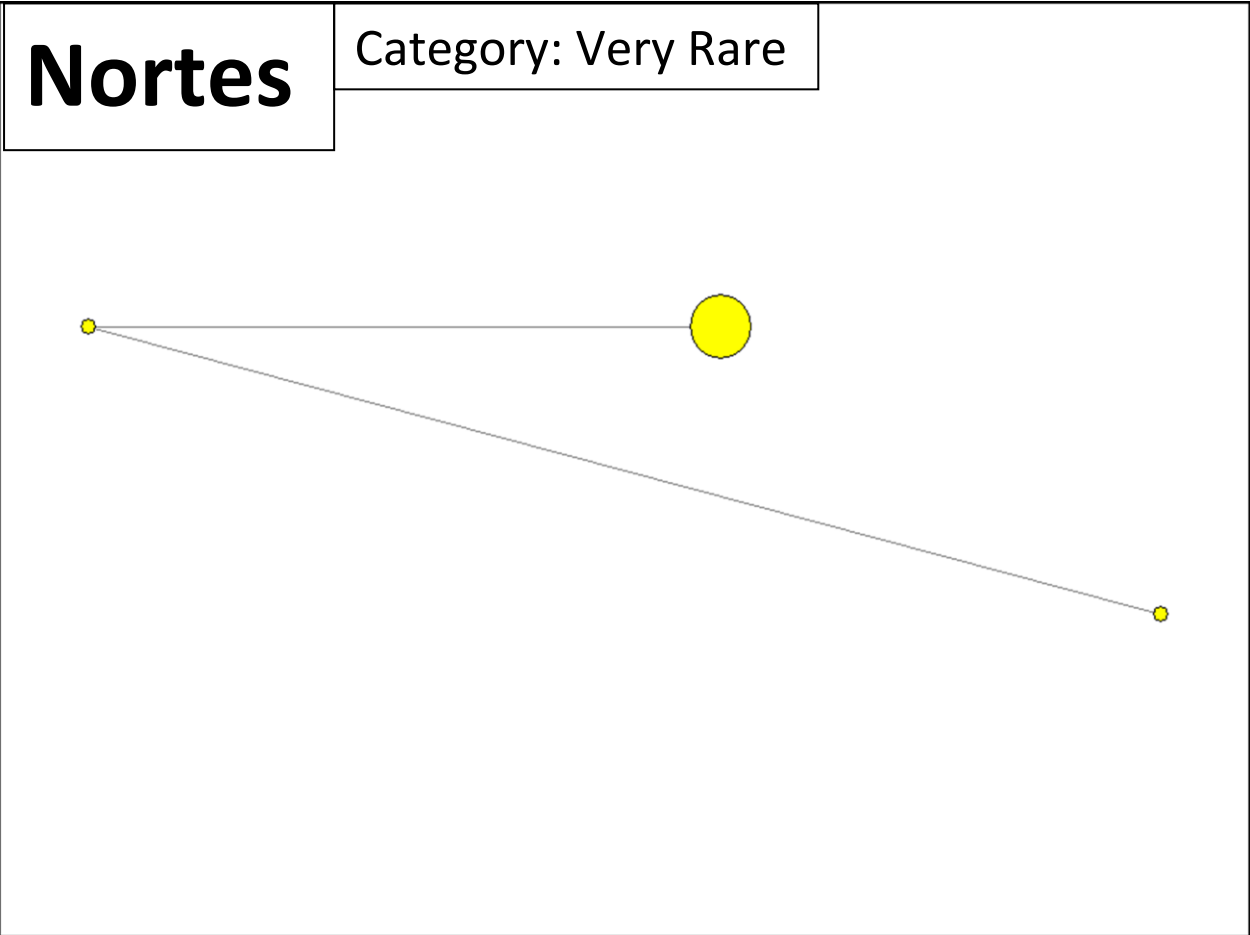
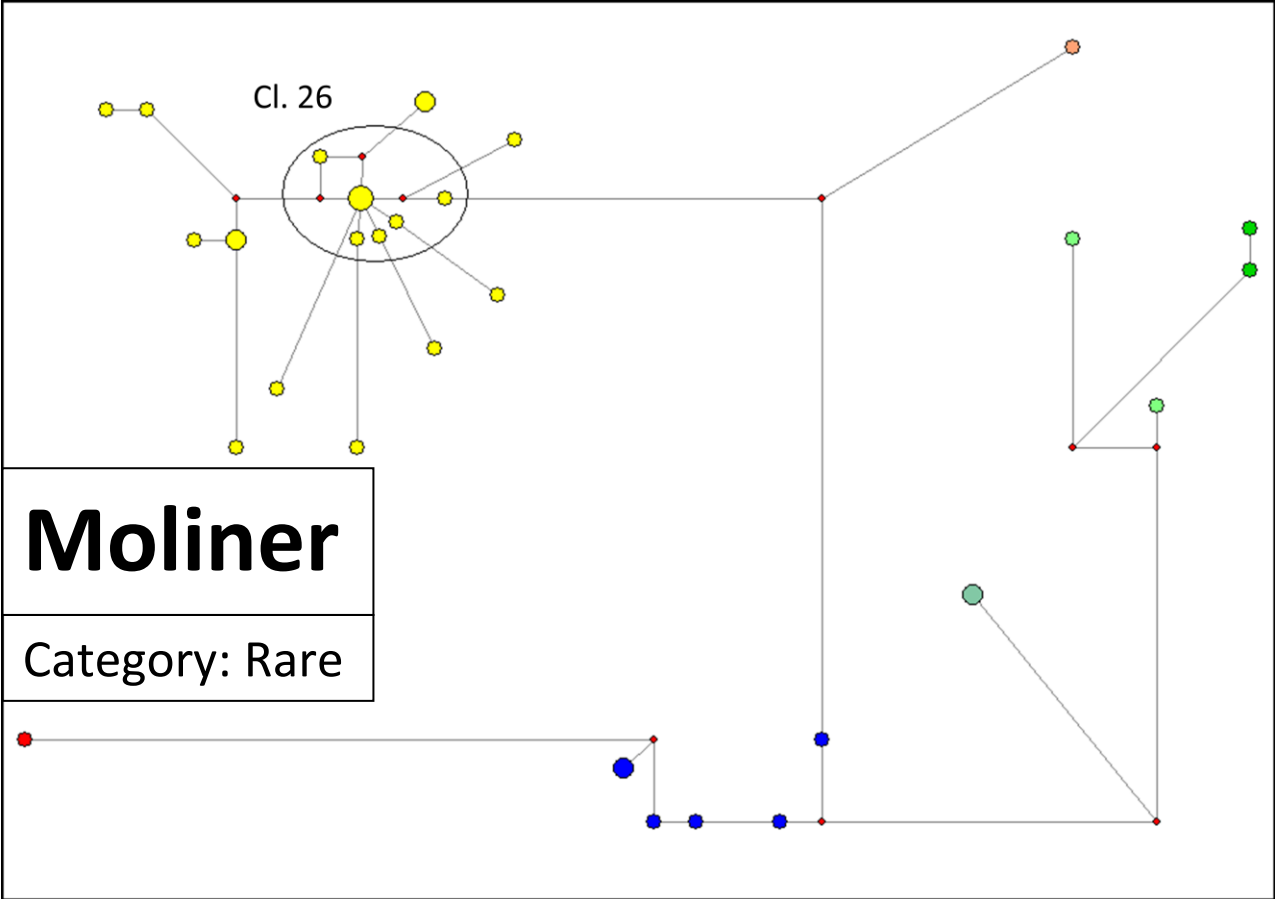


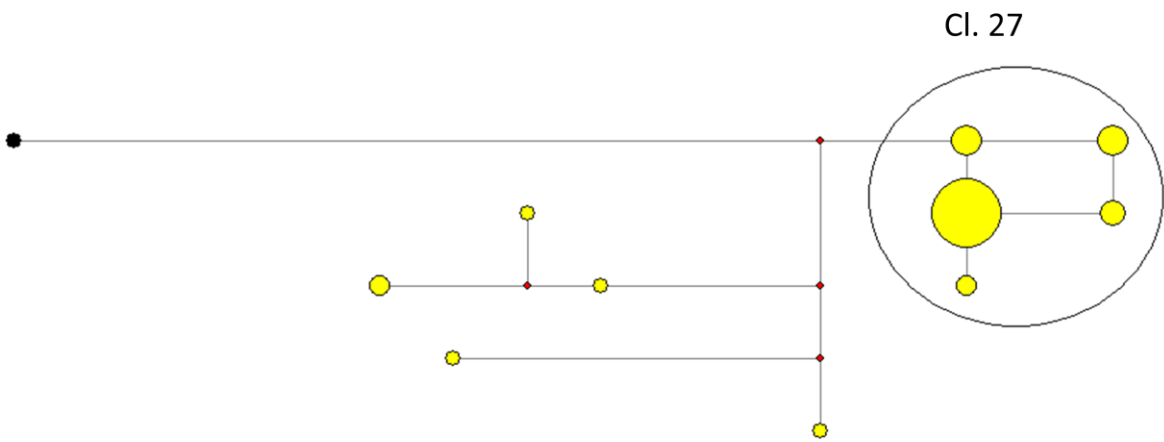
# Mateos

Category: Frequent



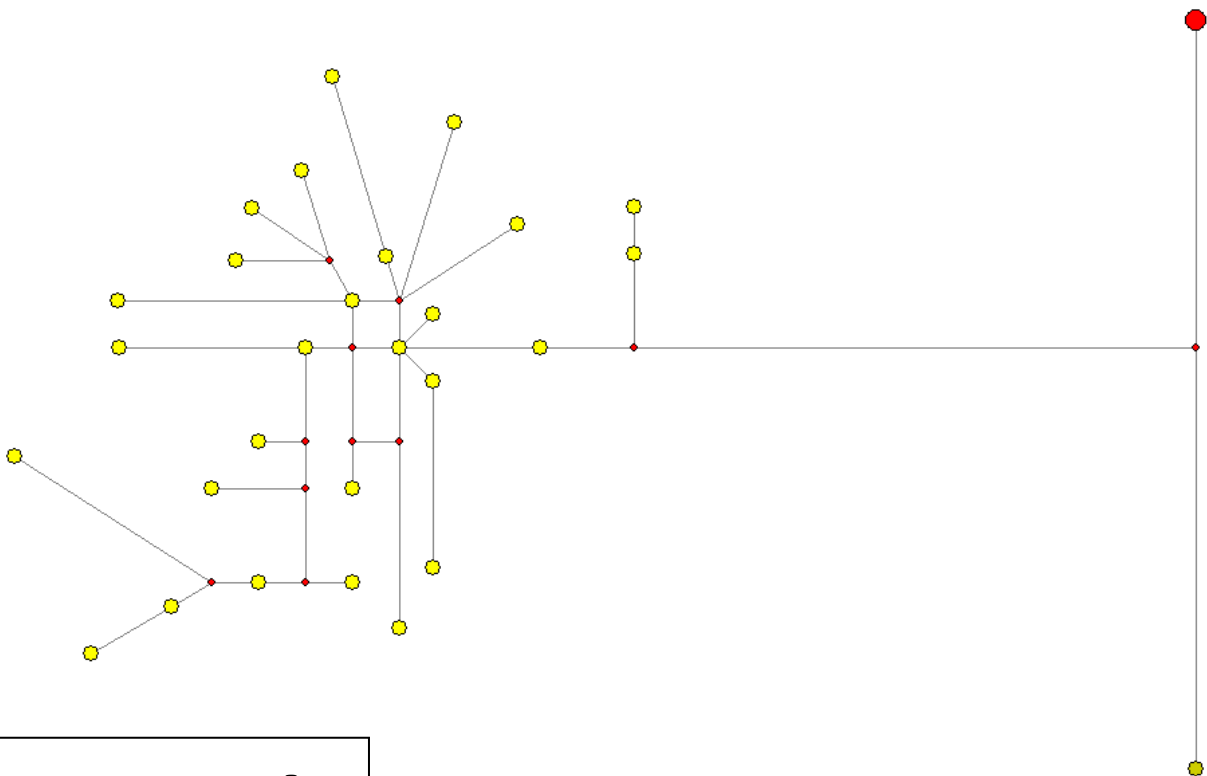






**Olaizola**

Category: Very Rare

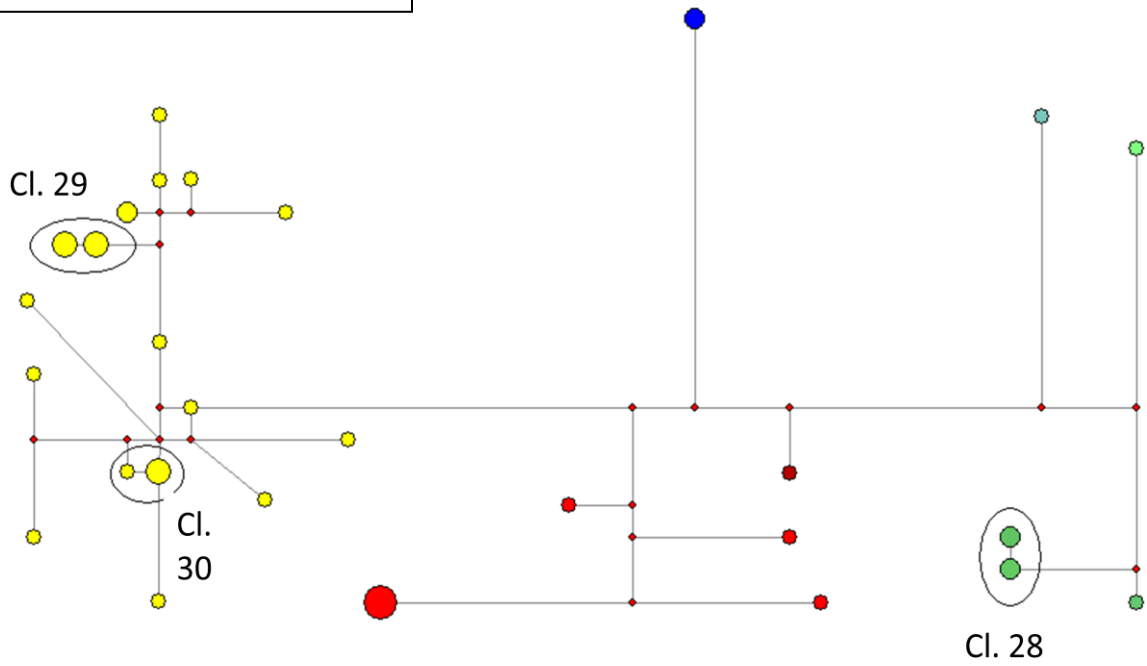


**Pascual**

Category: Frequent

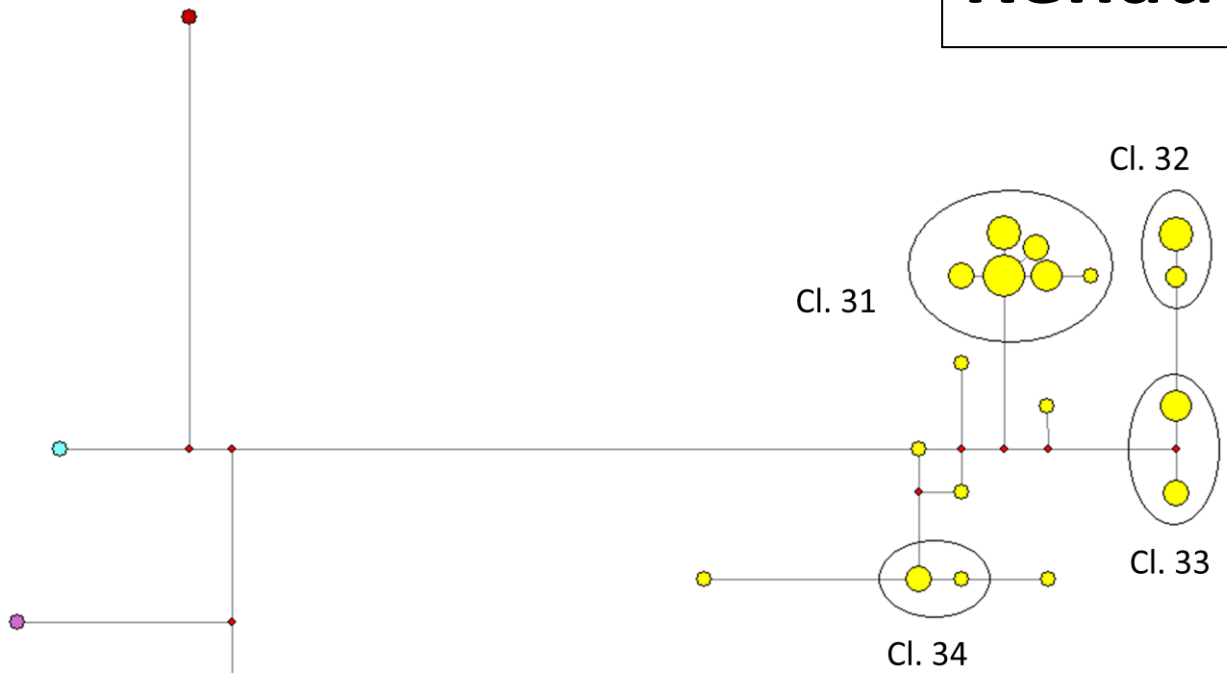
# Quevedo

Category: Medium



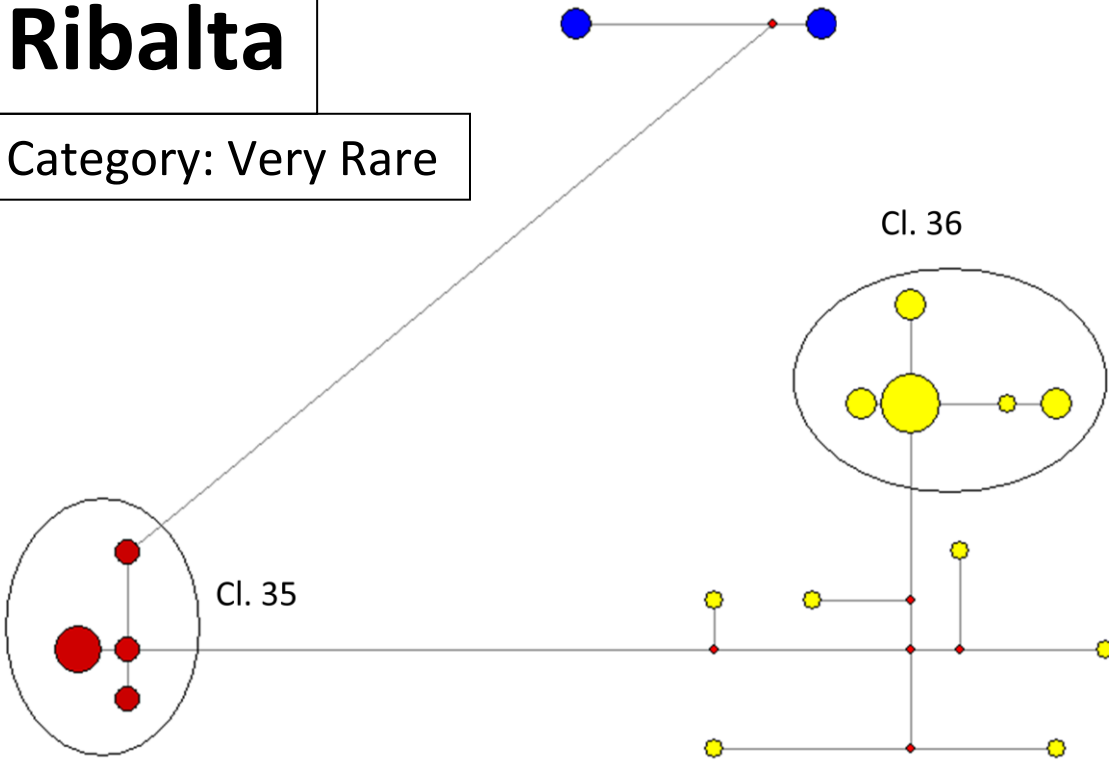
Category: Very Rare

# Renau



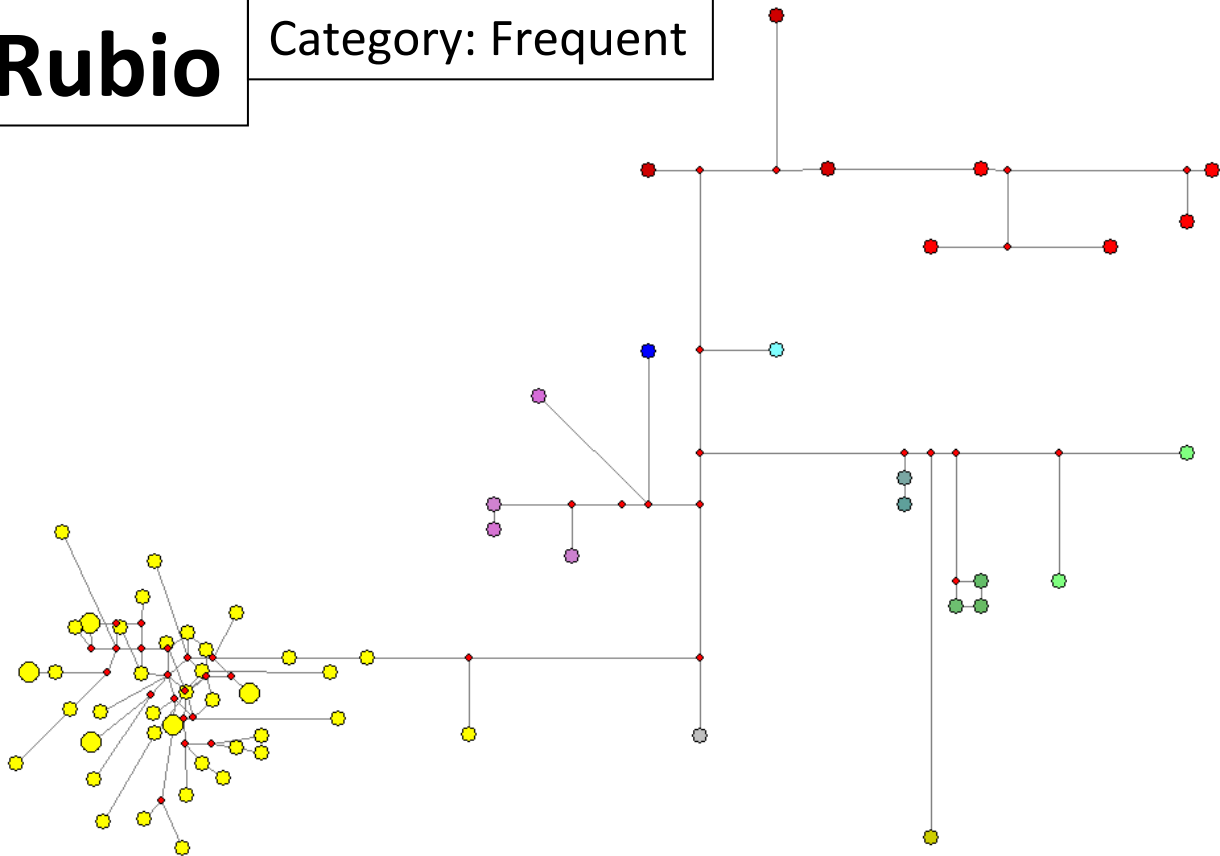
# Ribalta

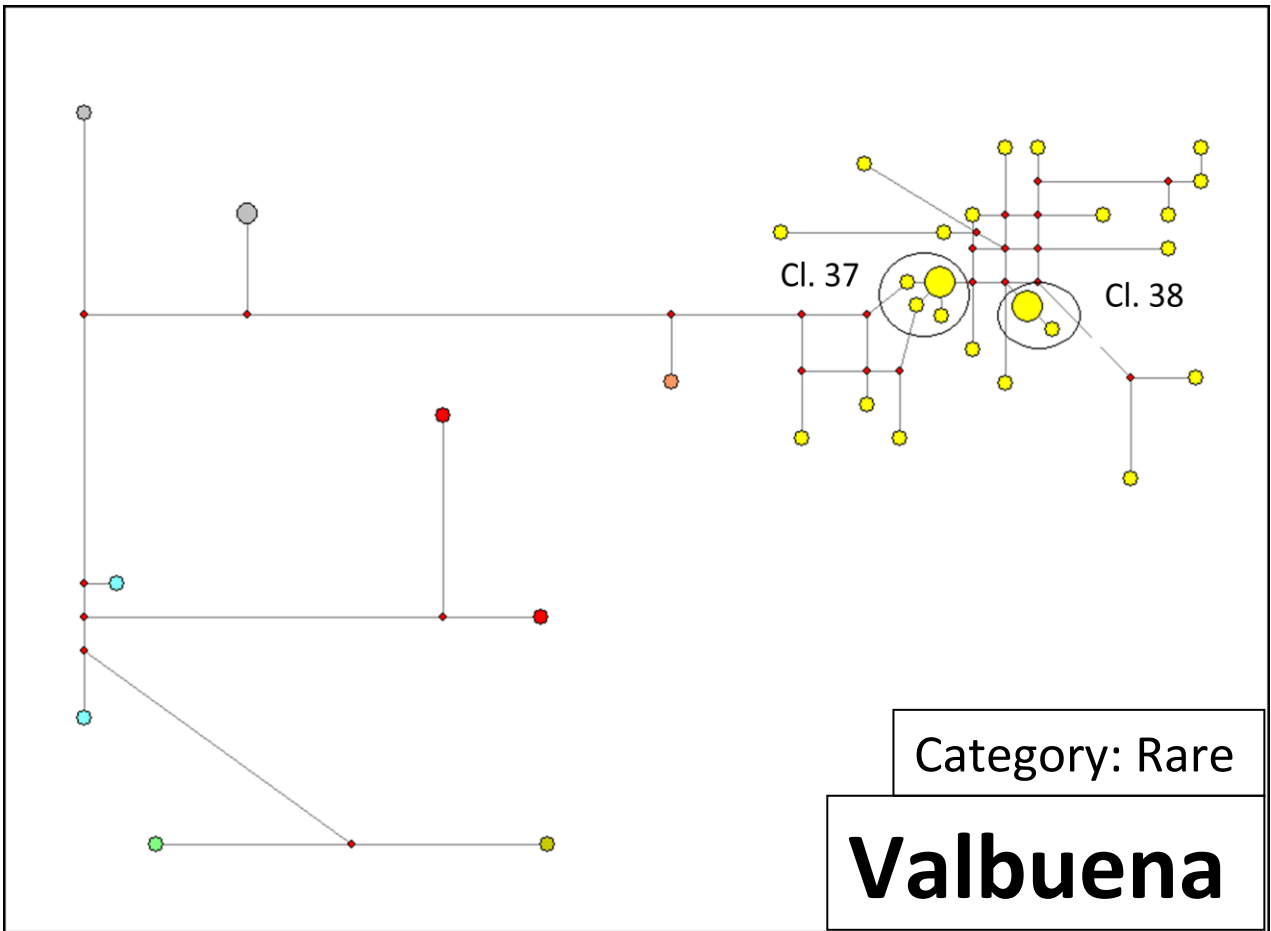
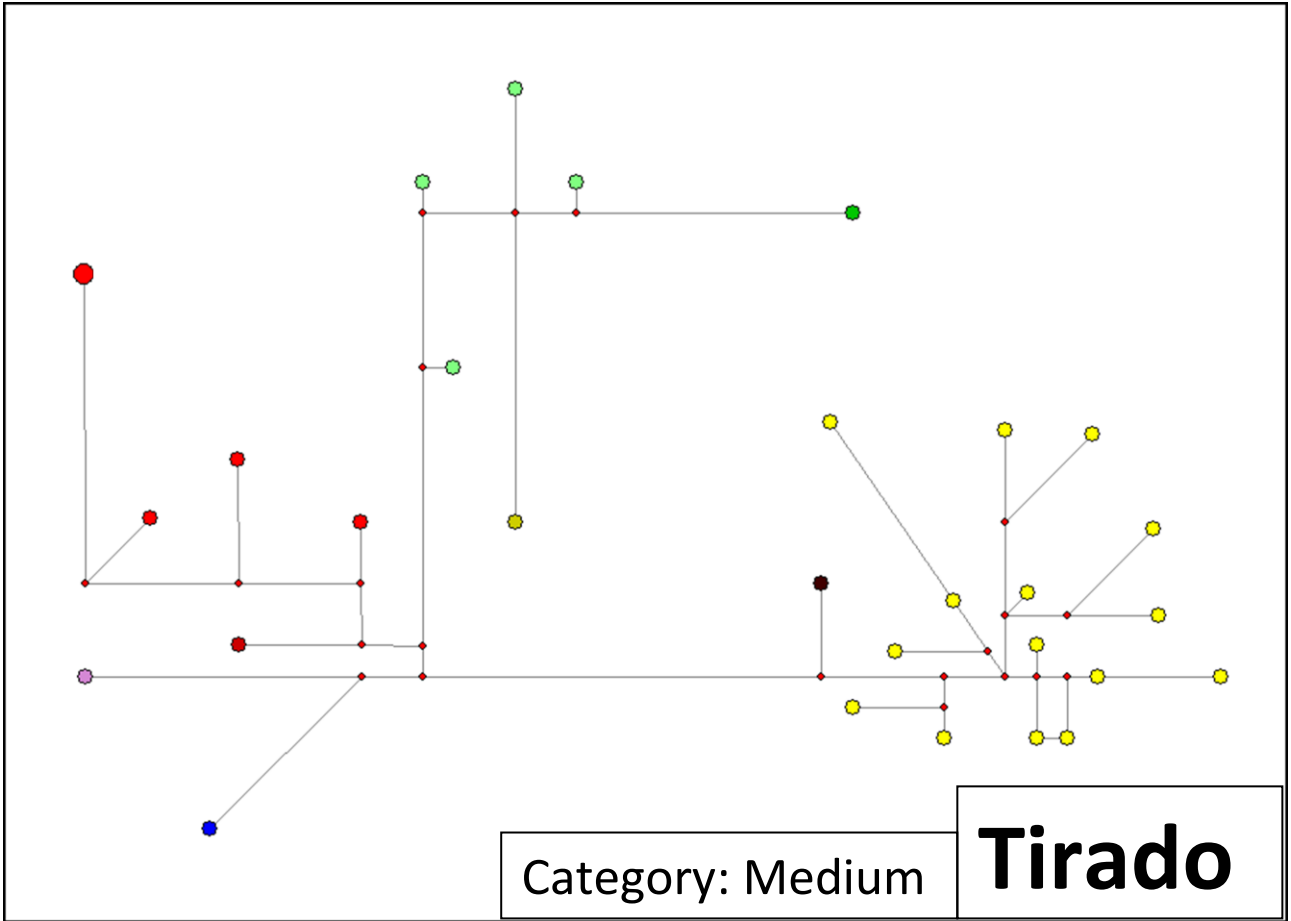
Category: Very Rare



# Rubio

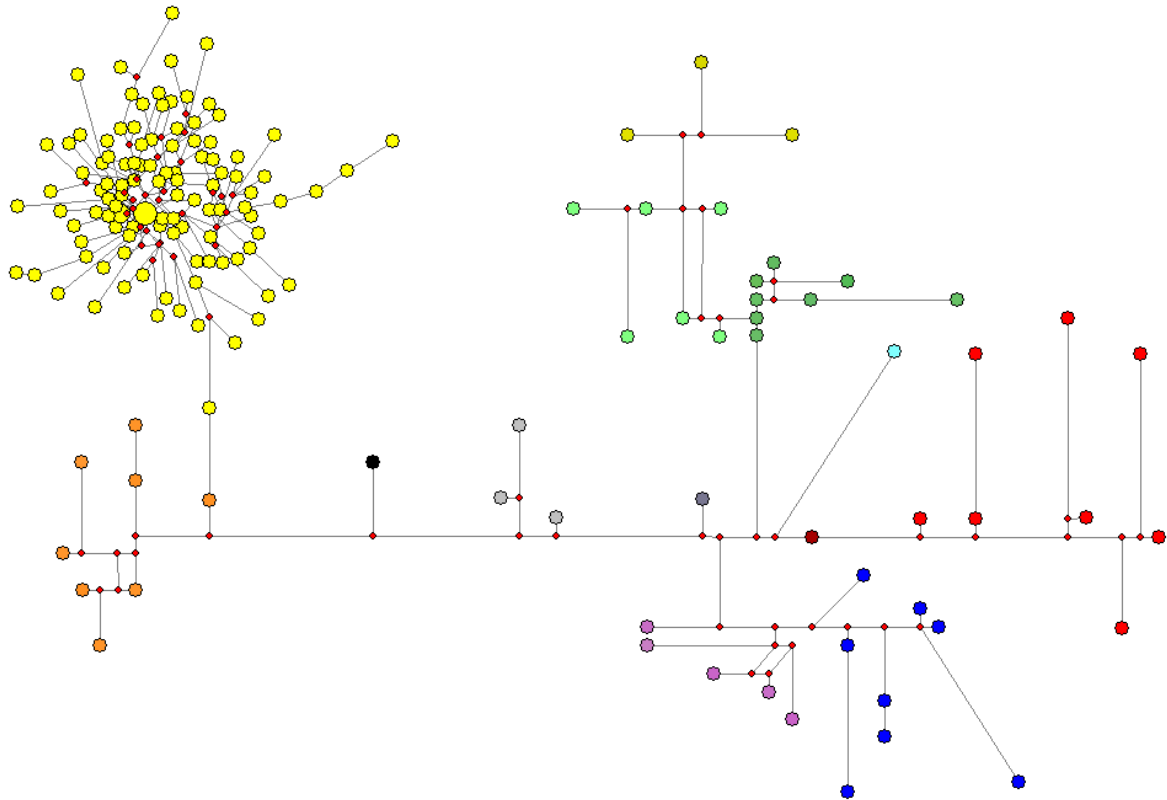
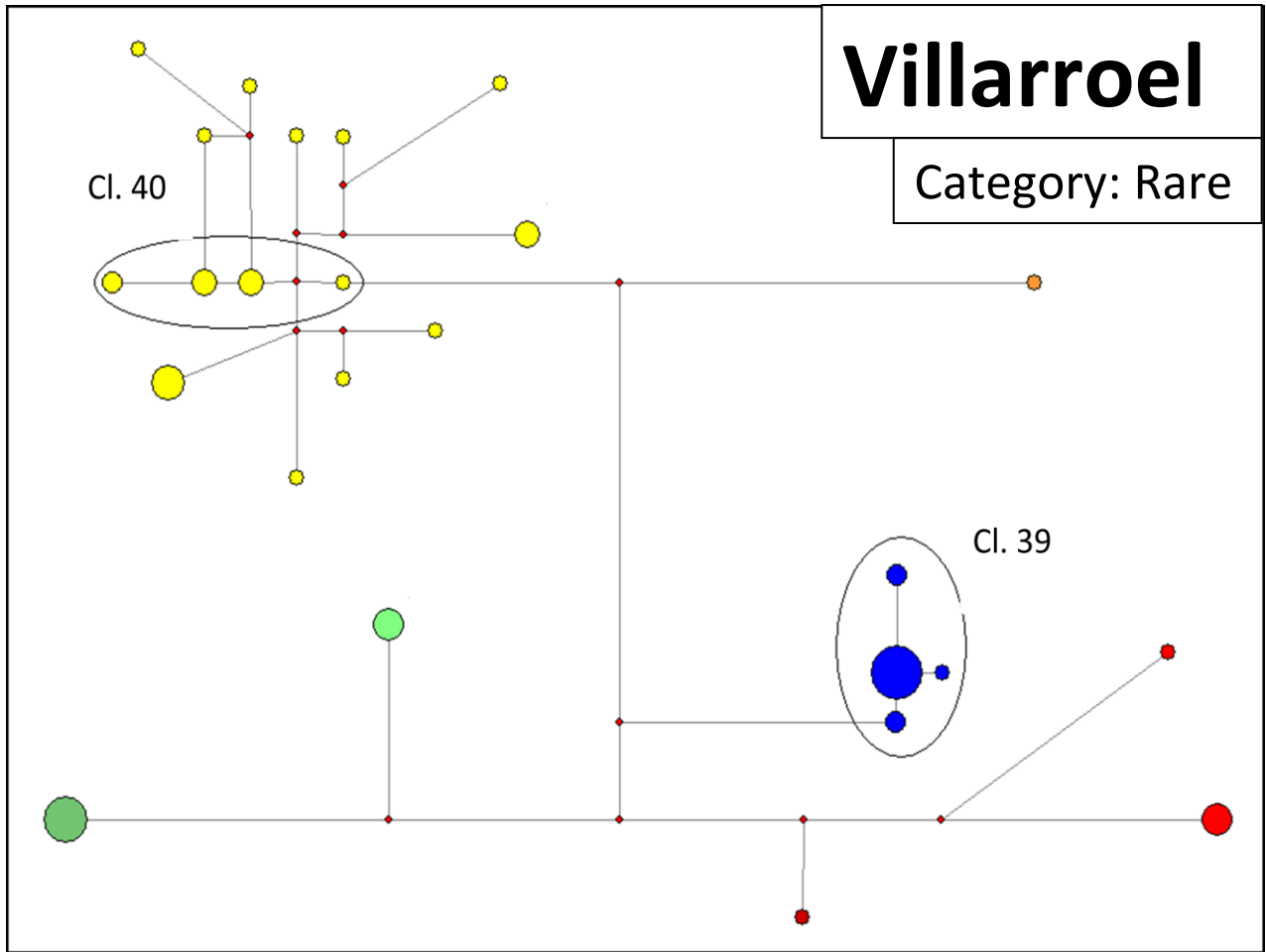
Category: Frequent





# Villarroel

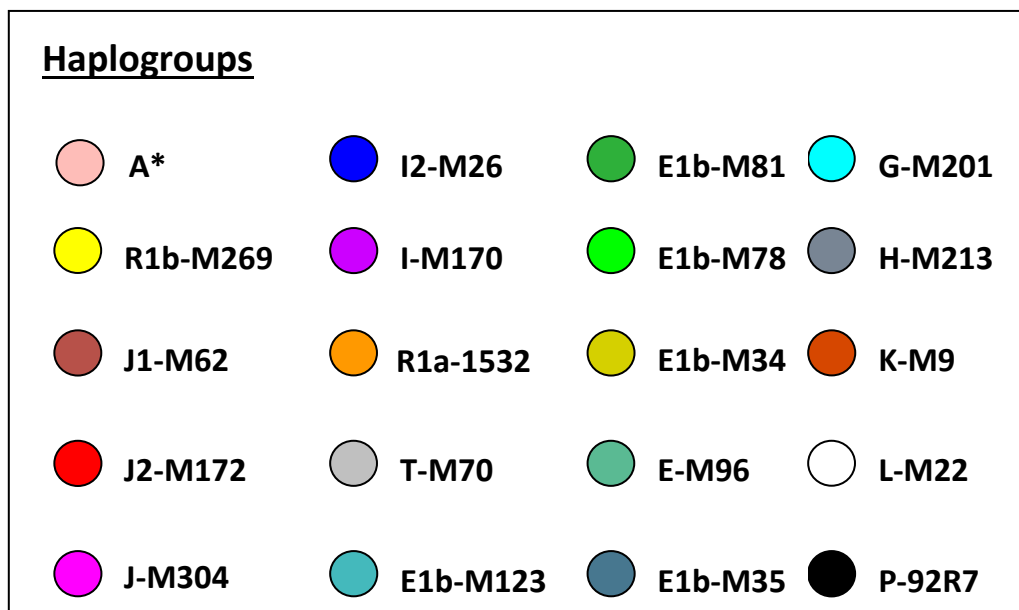
Category: Rare



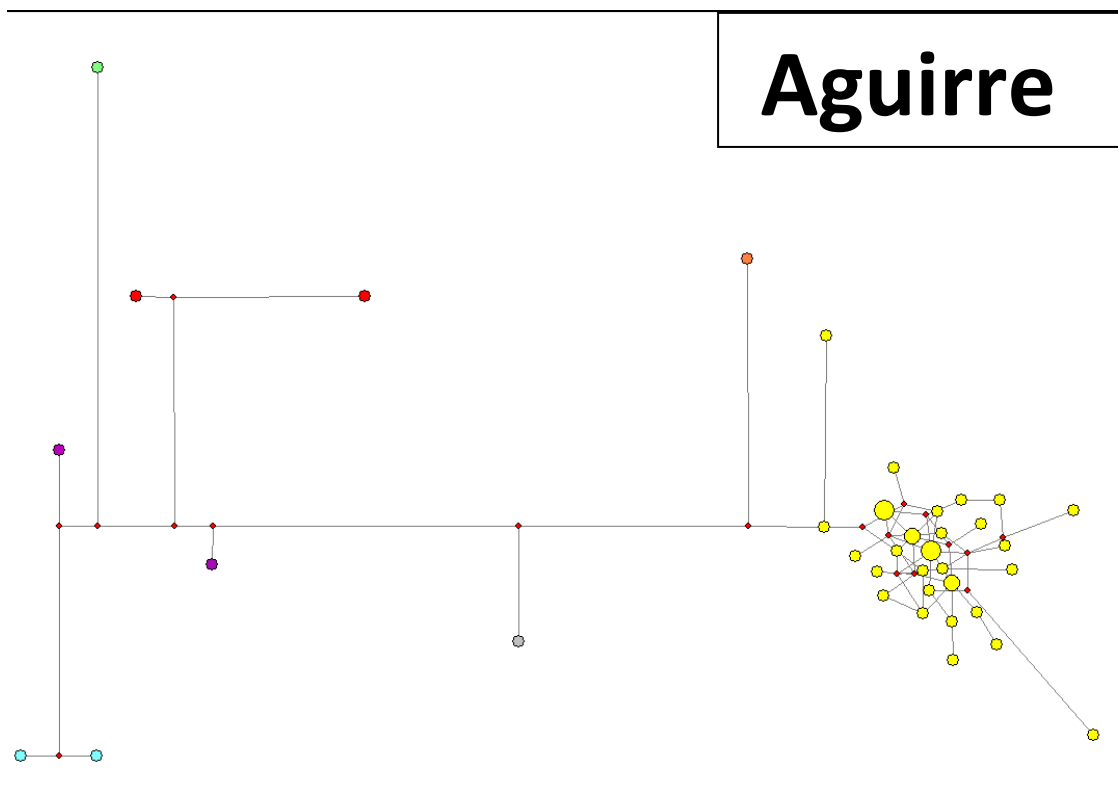
Spanish Controls

## MEDIAN-JOINING NETWORKS

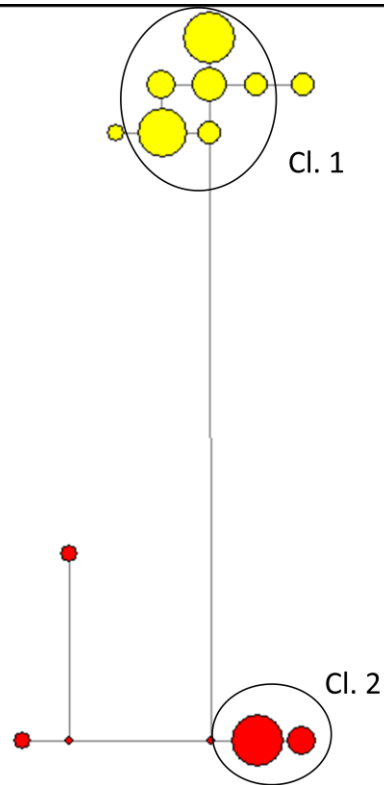
NETWORKS OF COMPARATIVE DATA (SPANISH, ENGLISH AND IRISH SURNAMES, IN THAT ORDER) BASED ON SNPs AND 10 SHARED STRs, SHOWING ALL DESCENT CLUSTERS (IN ALPHABETICAL ORDER).



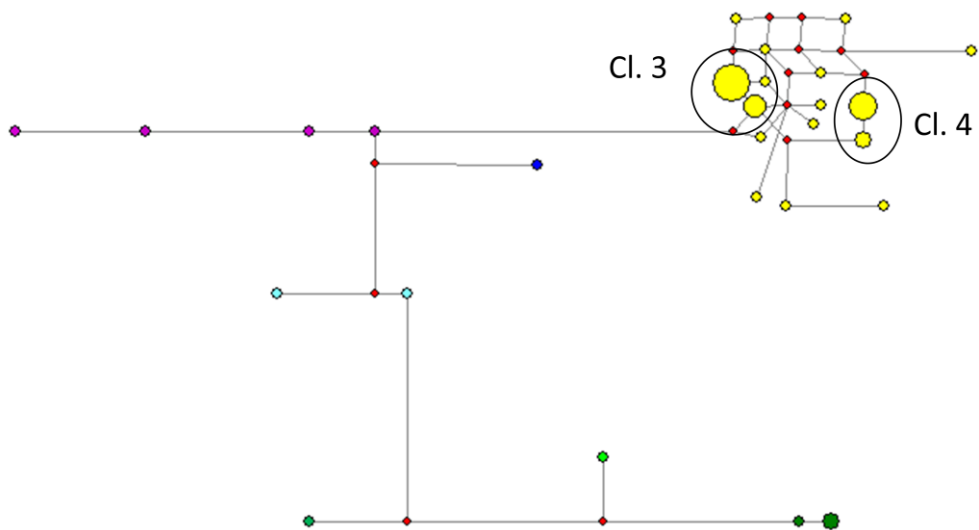
## SPAIN



# Albiol

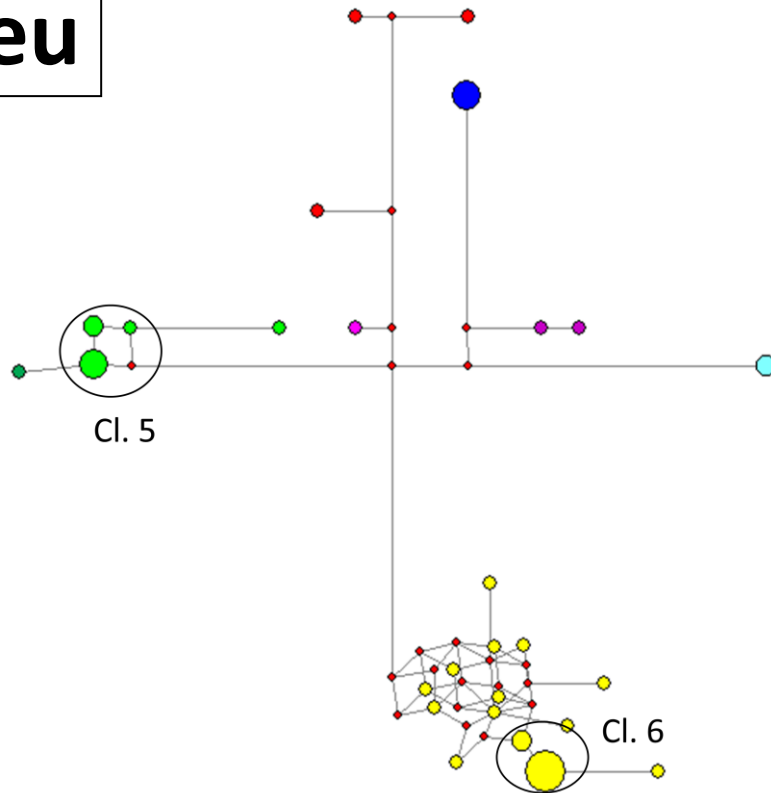


# Alegre

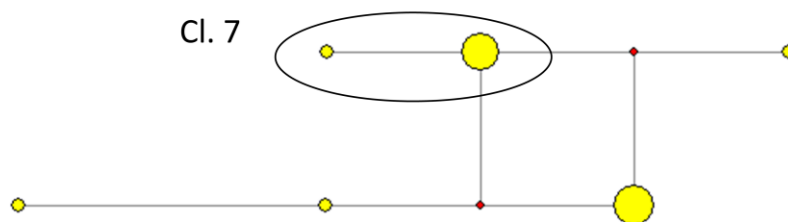




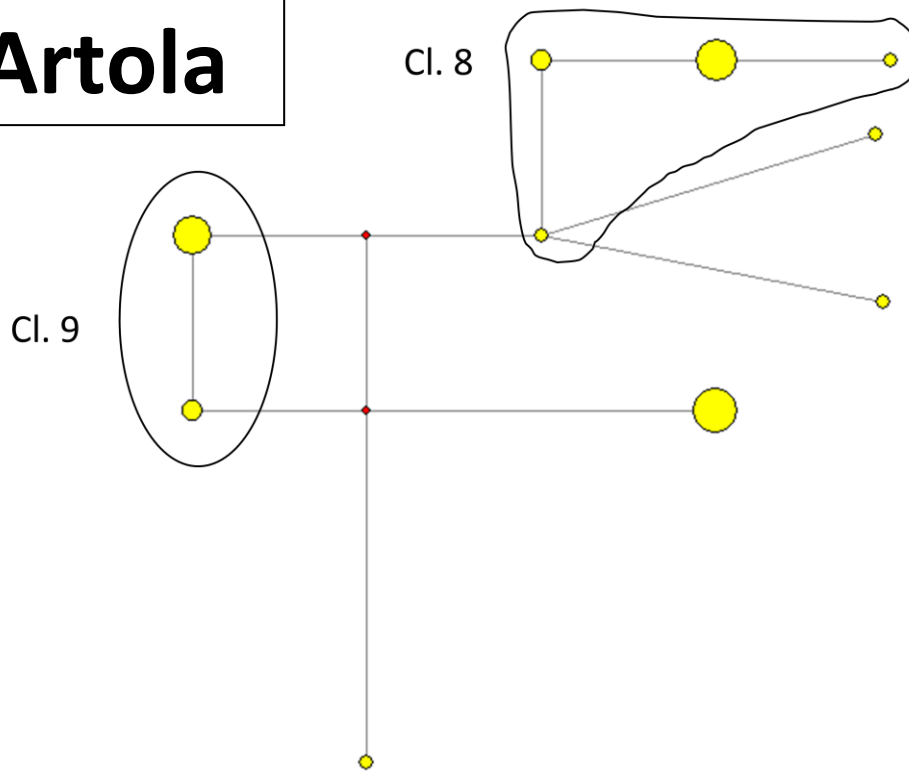
# Andreu



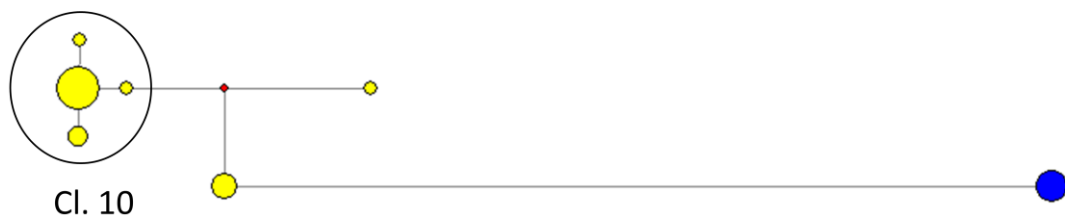
# Ansotegui / Ansuategui

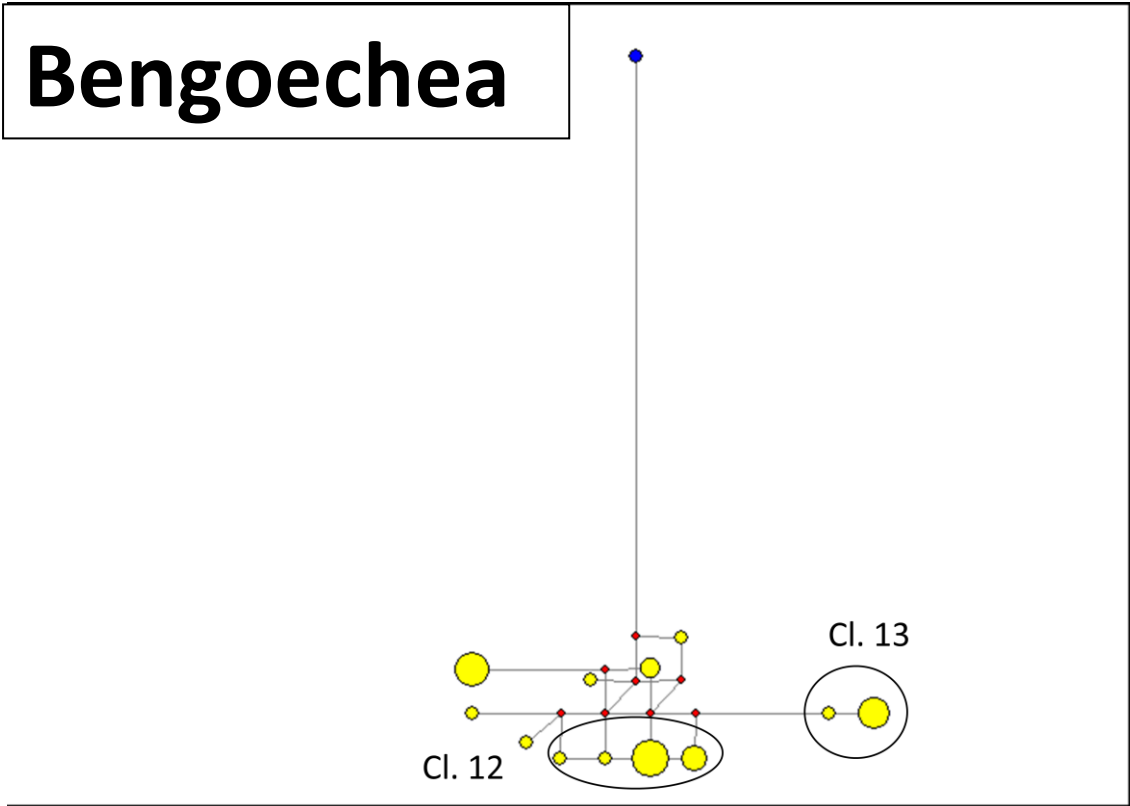
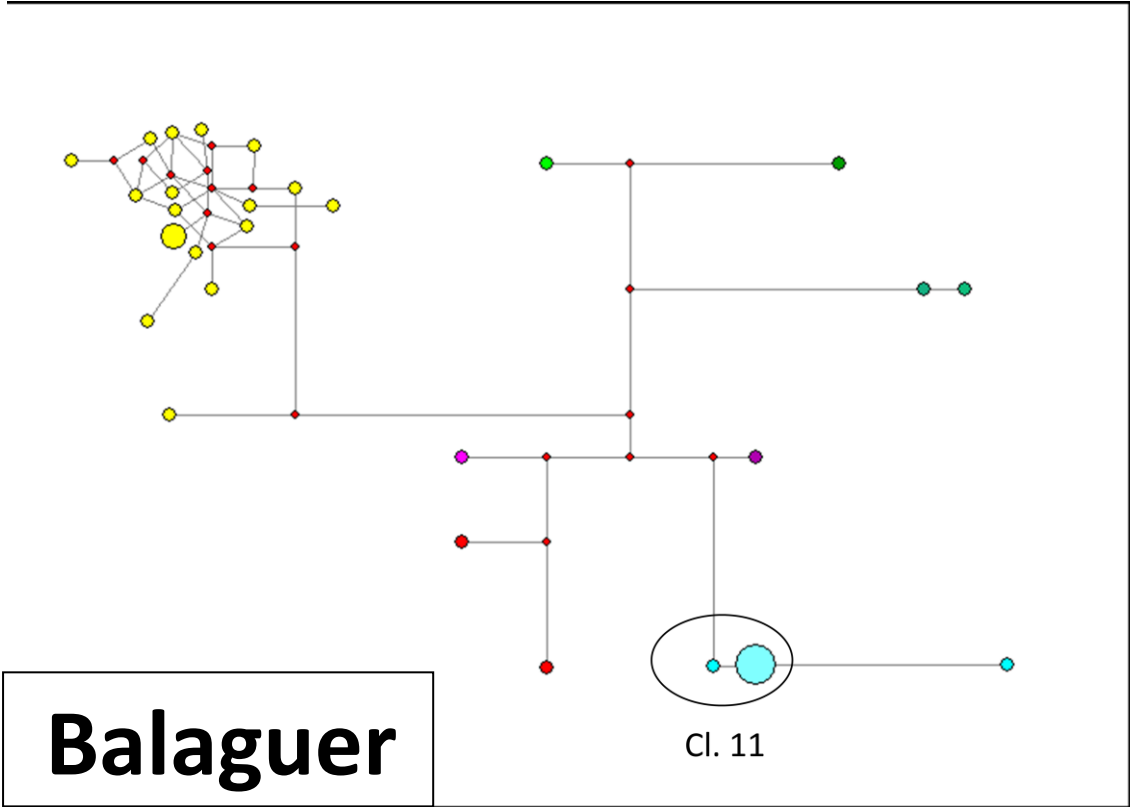


# Artola

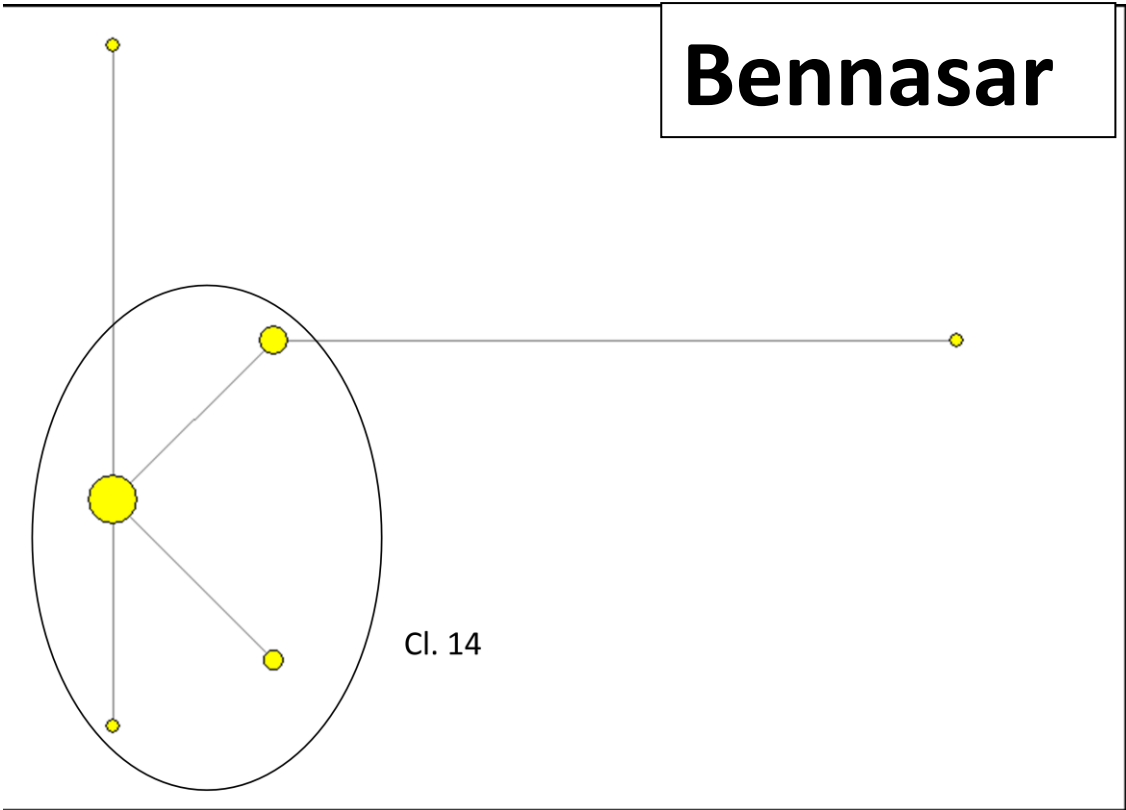


# Baigorri

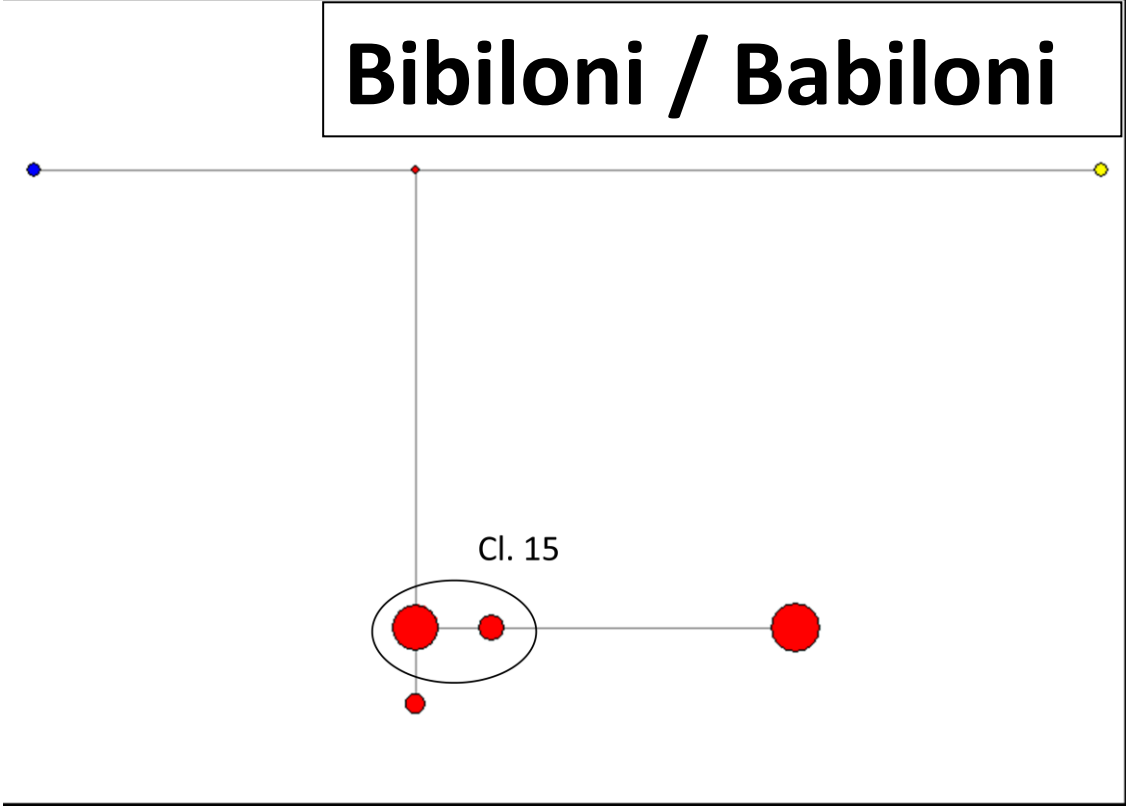




# Bennasar



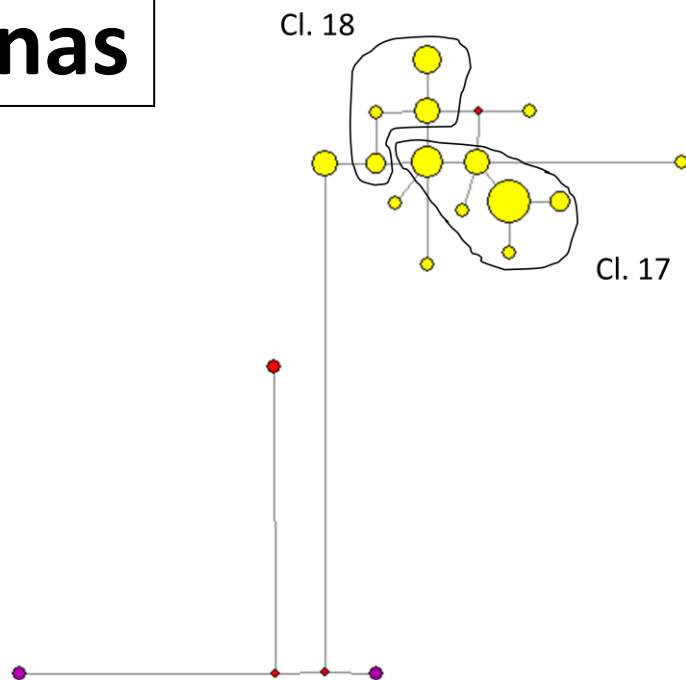
# Bibiloni / Babiloni



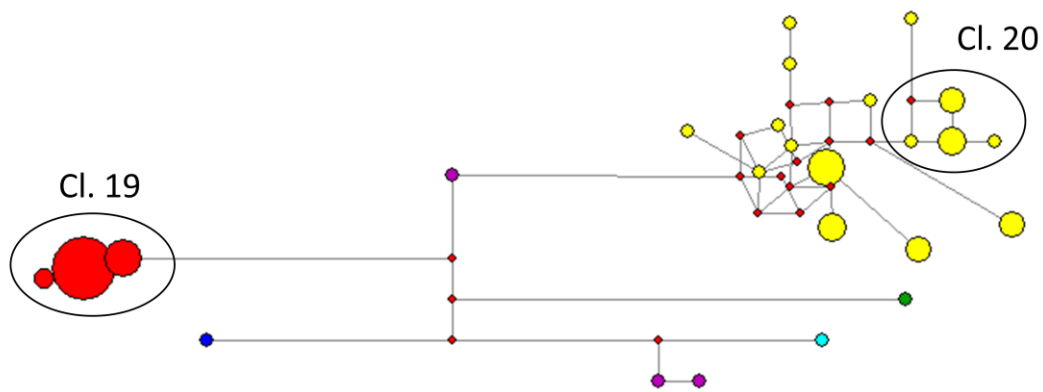
# Boluda



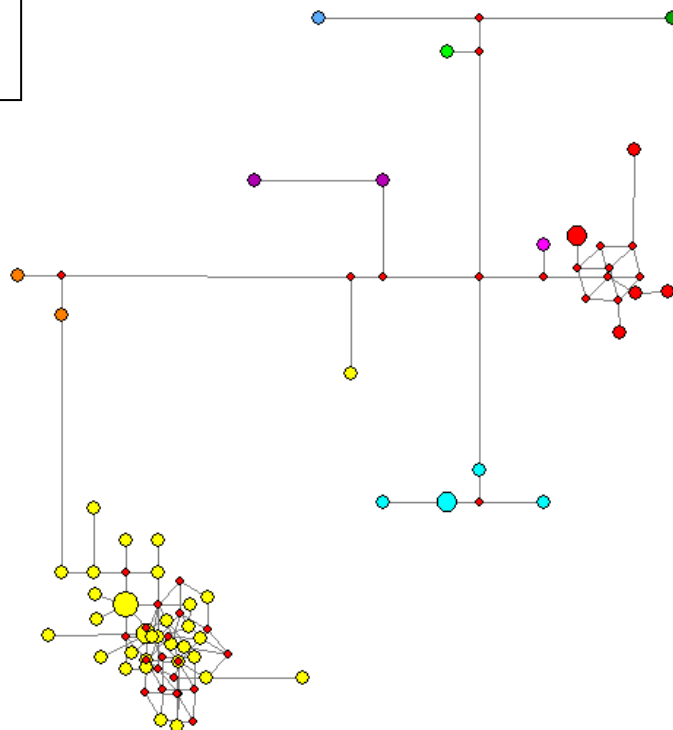
# Cadenas



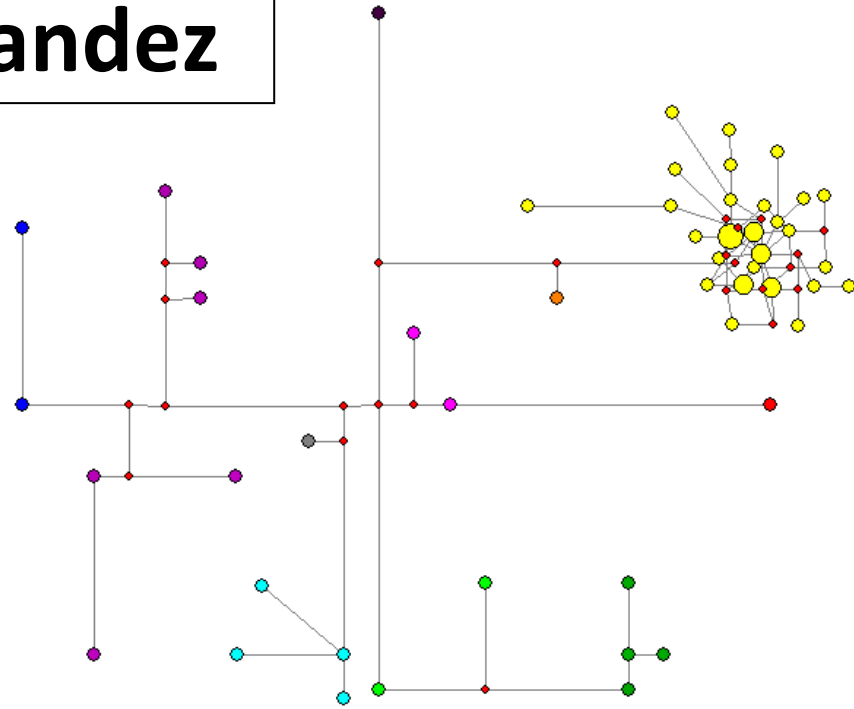
# Castell



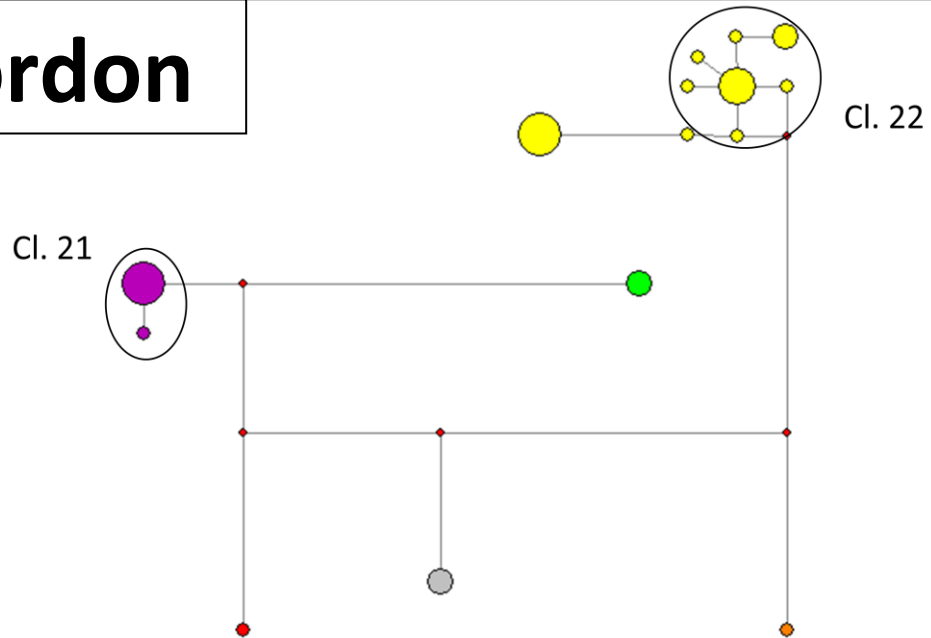
# Diez



# Fernandez

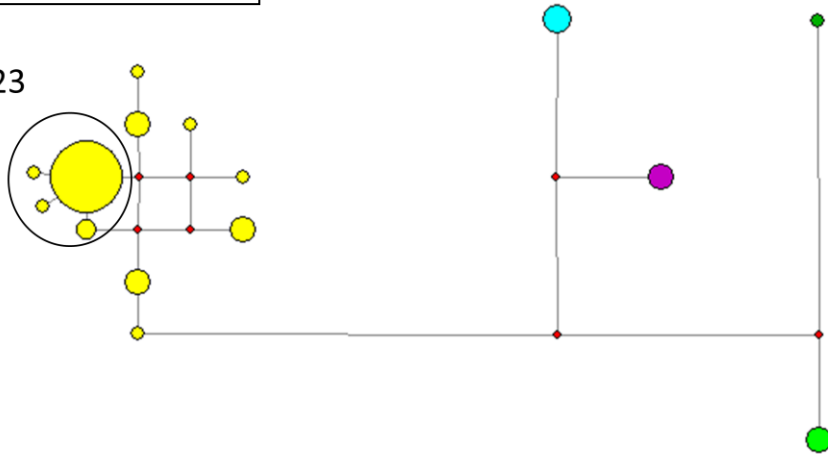


# Gordon



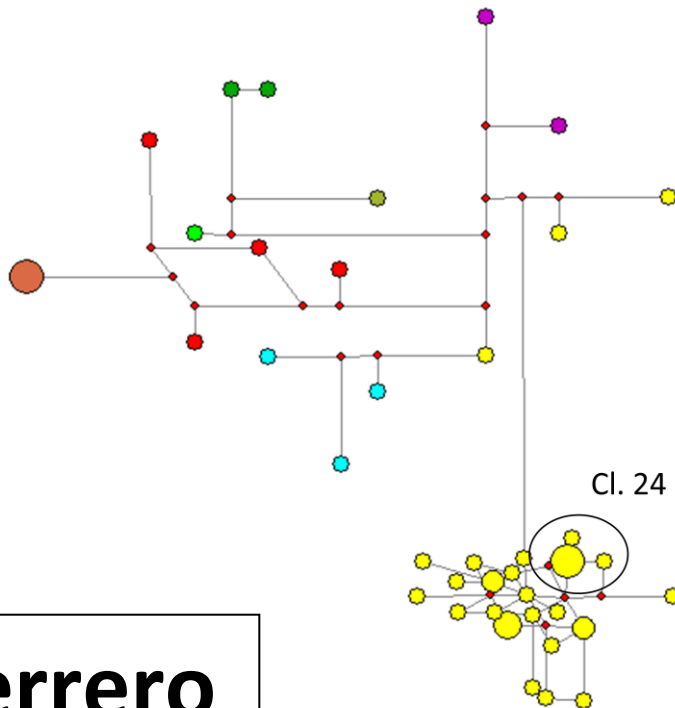
# Granell

Cl. 23



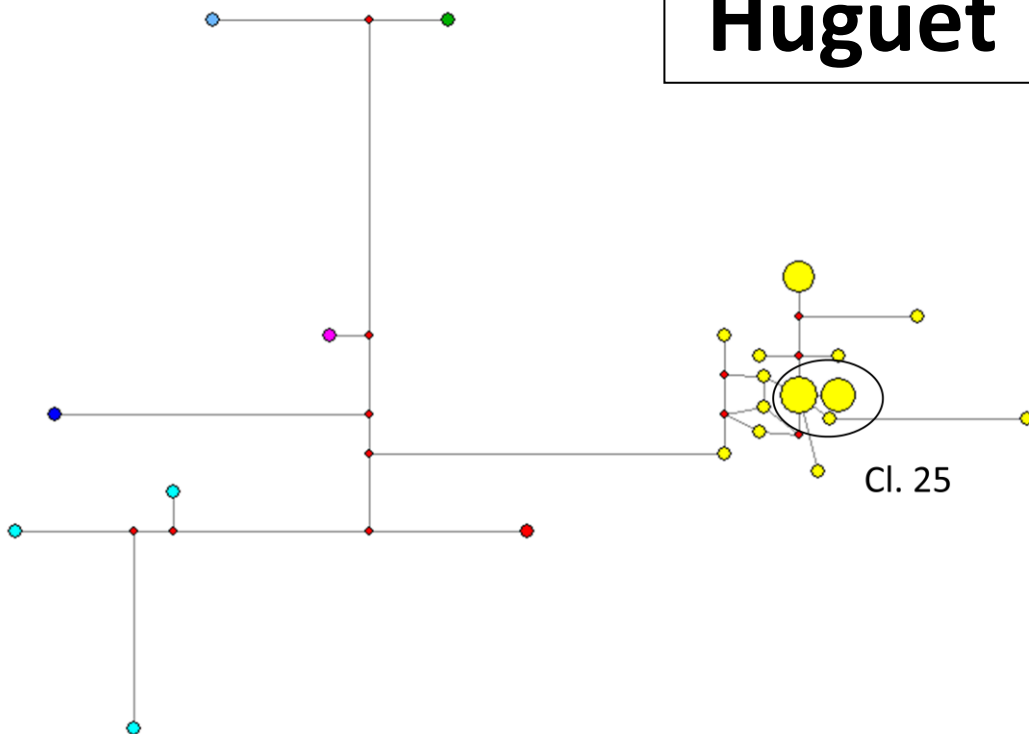
# Herrero

Cl. 24

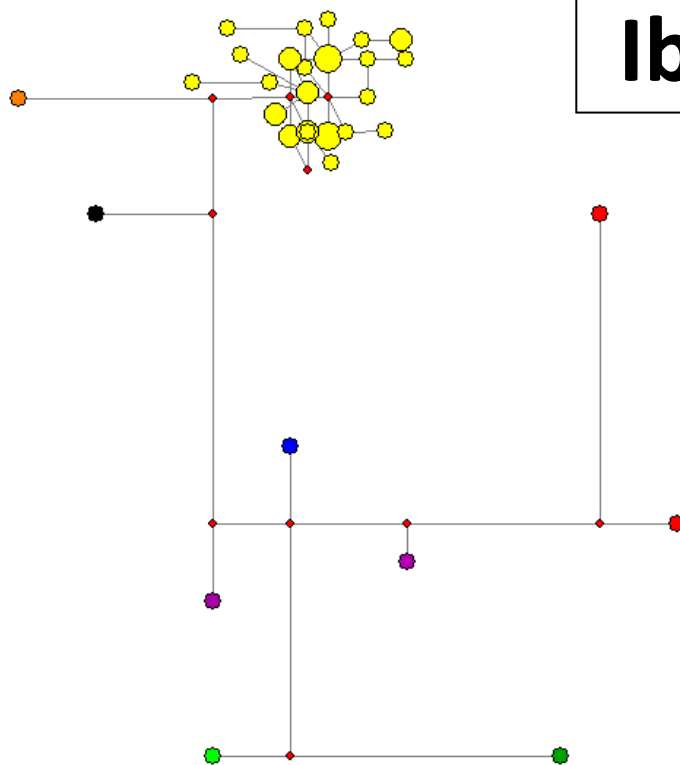




# Huguet

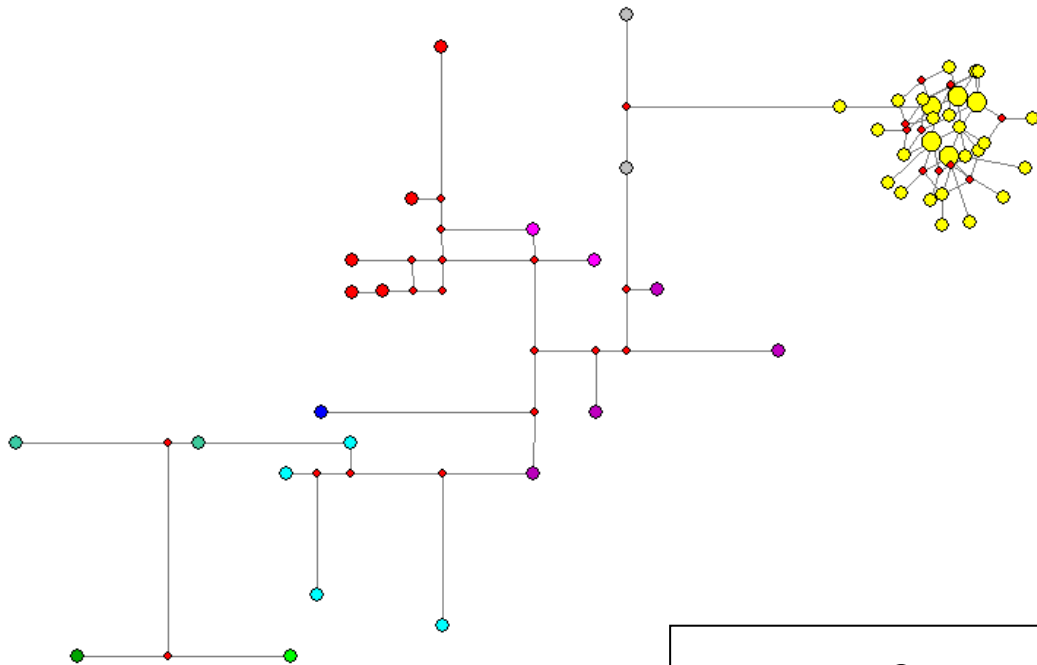
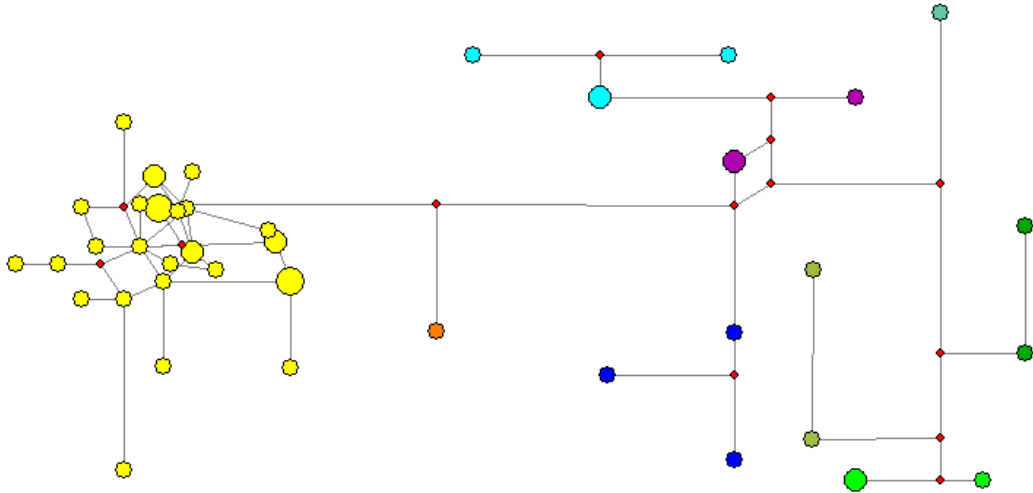


# Ibarra



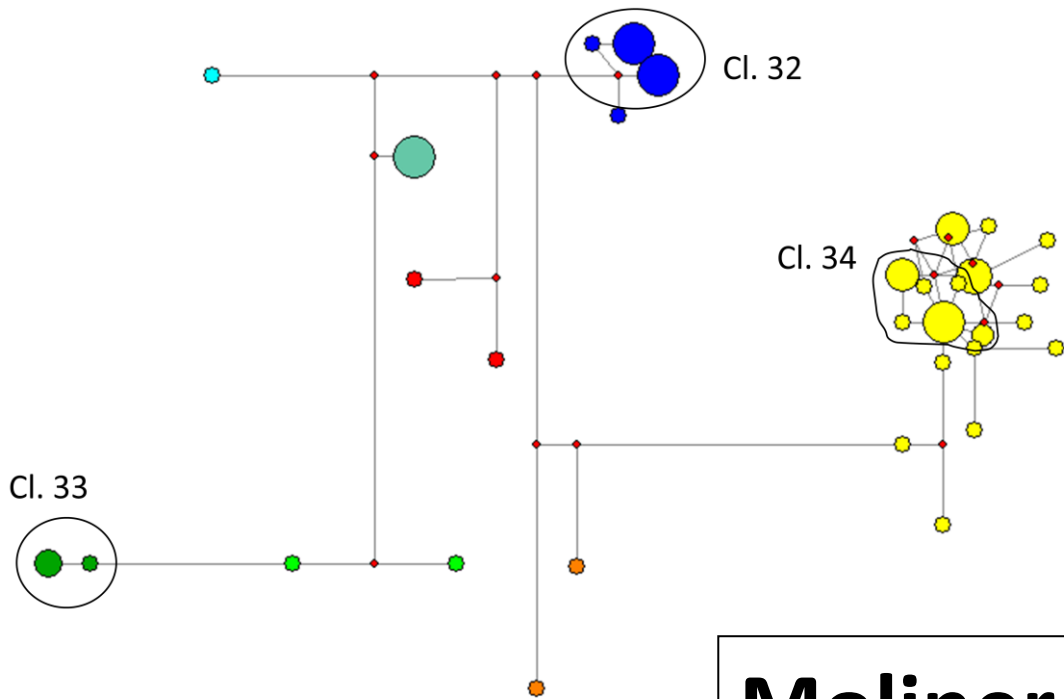
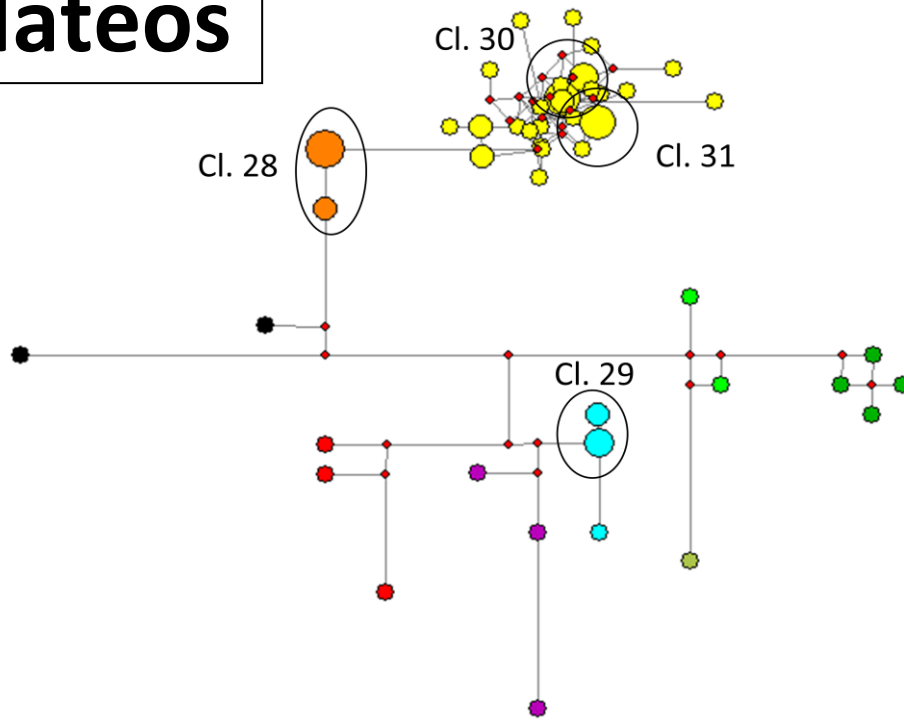


# Marques

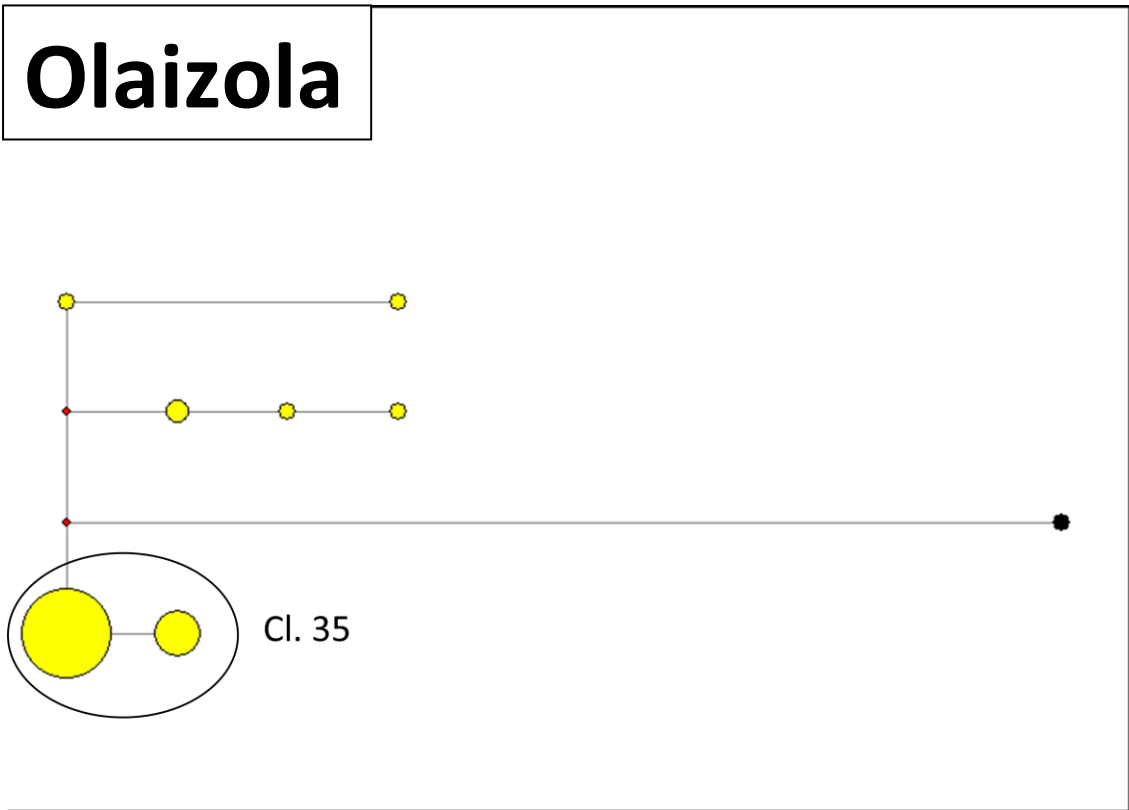
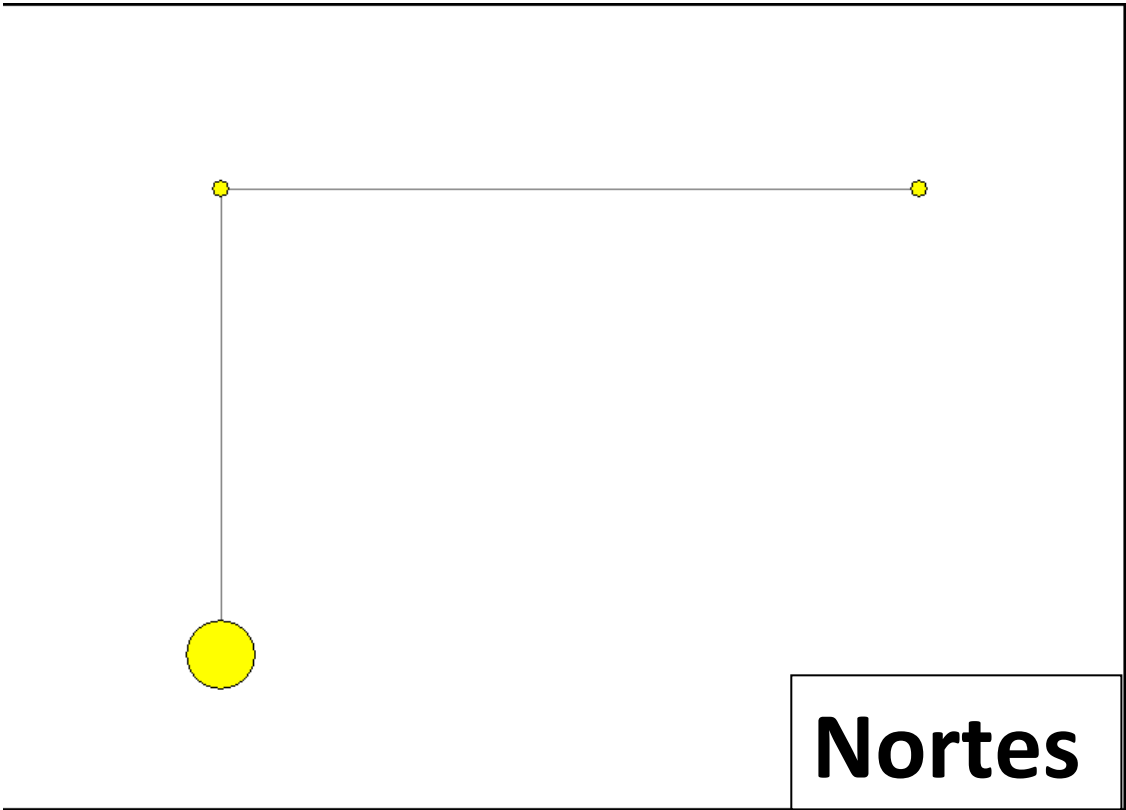


# Martinez

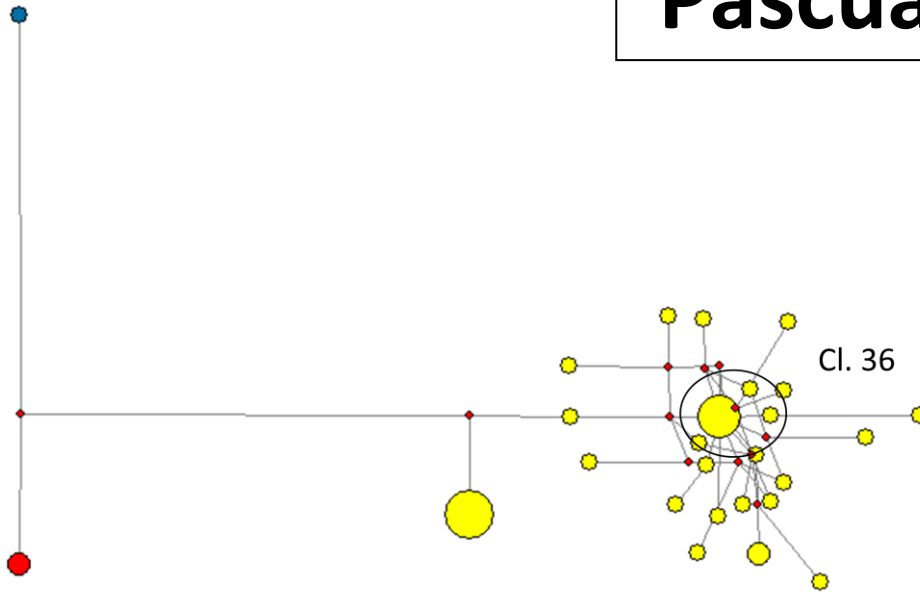
# Mateos



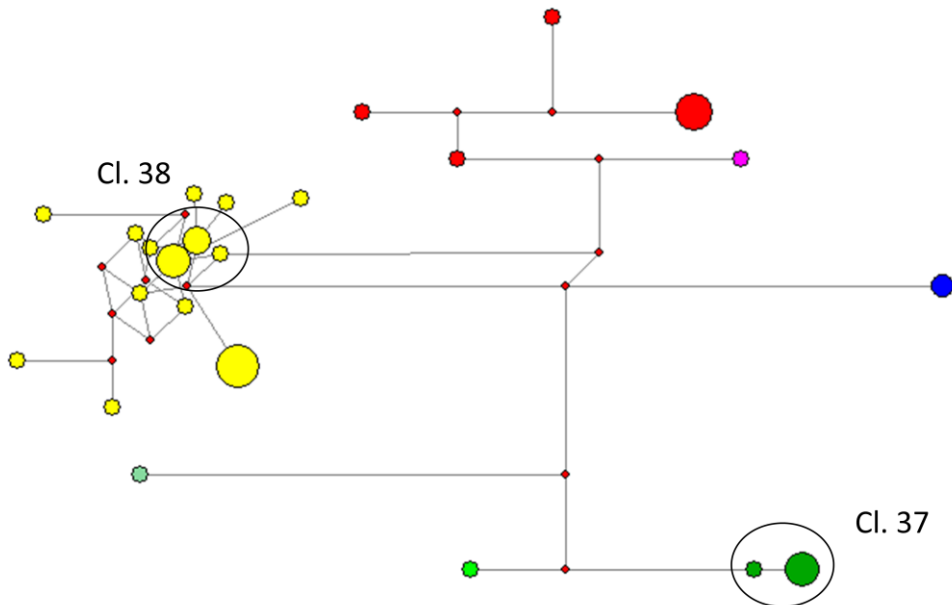
# Moliner



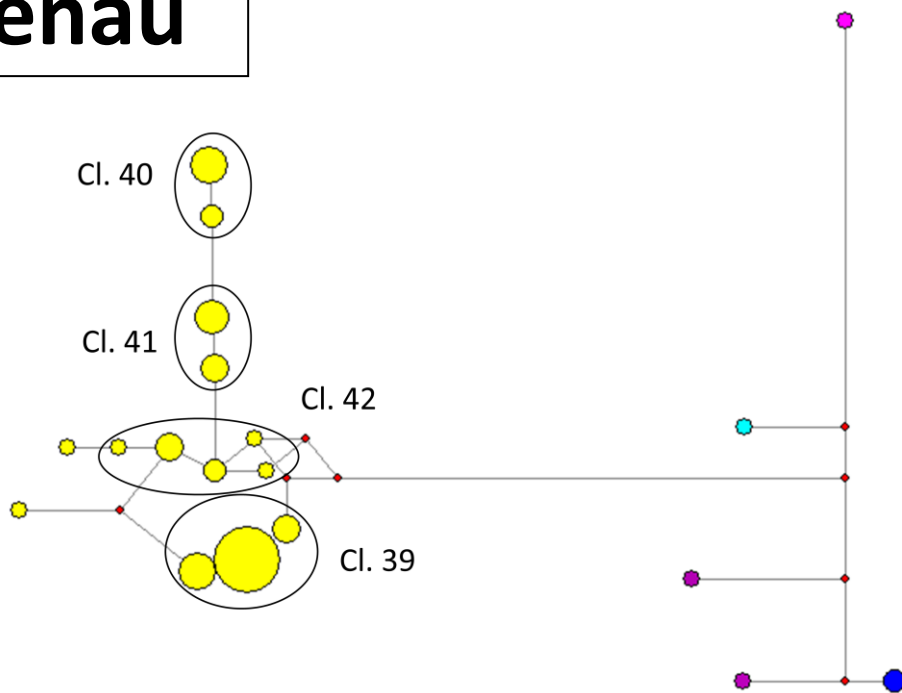
# Pascual



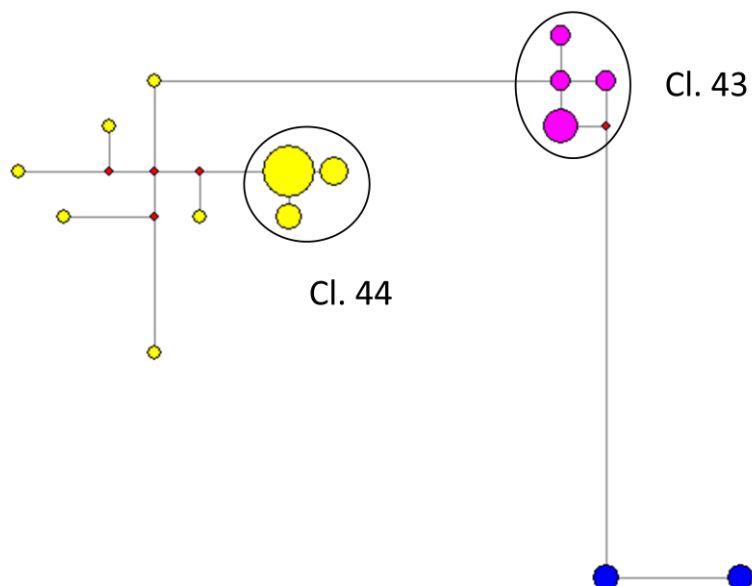
# Quevedo



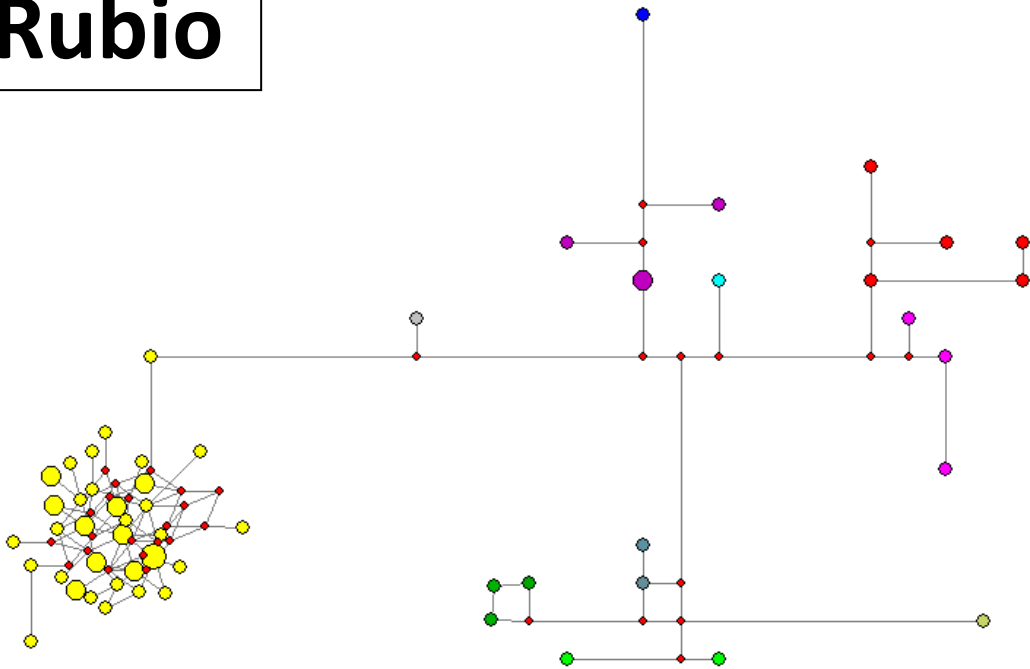
# Renau



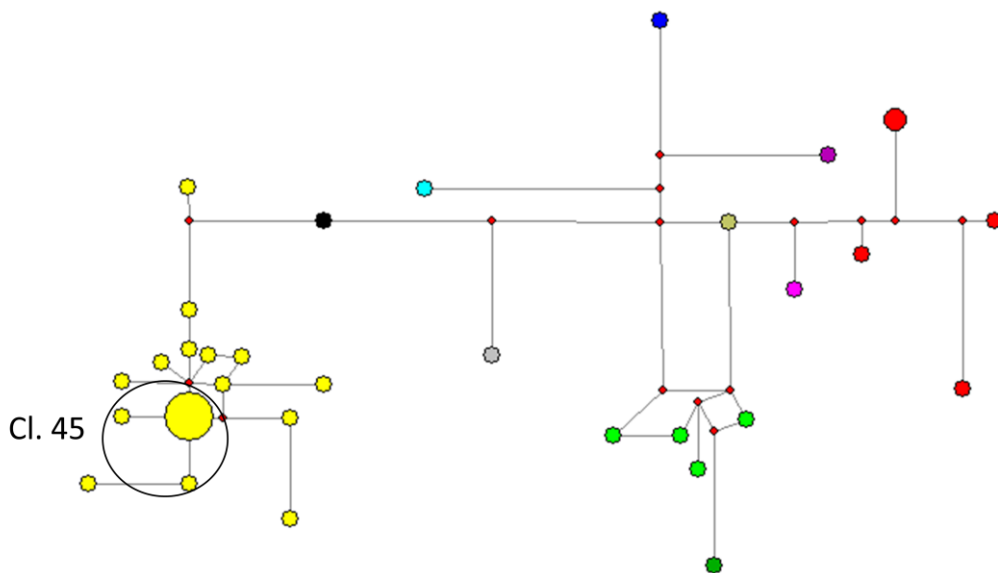
# Ribalta



# Rubio

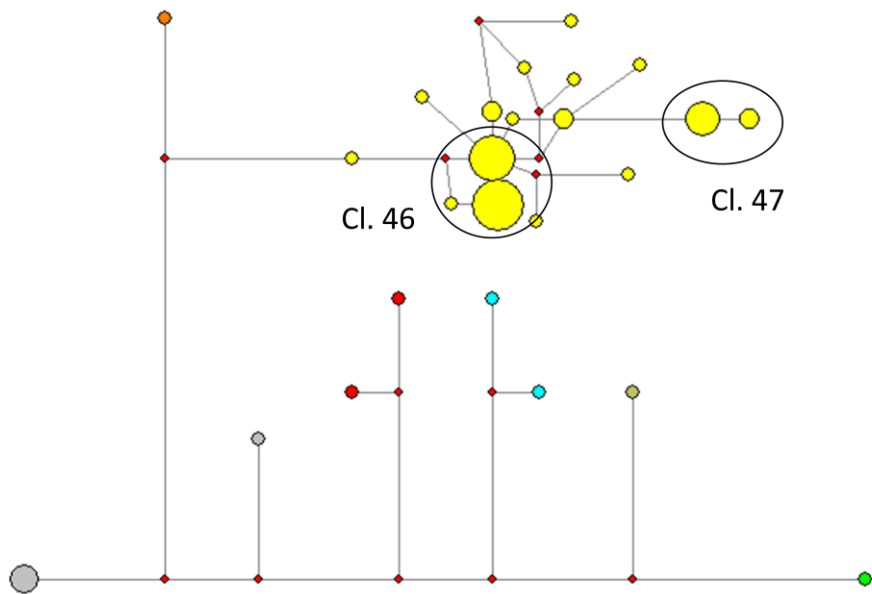


# Tirado

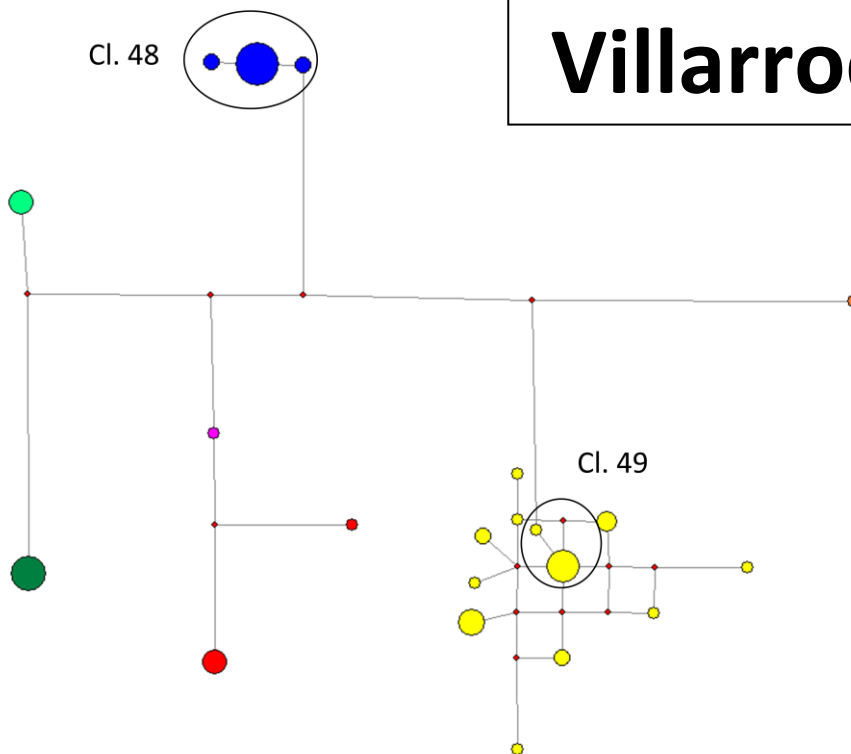




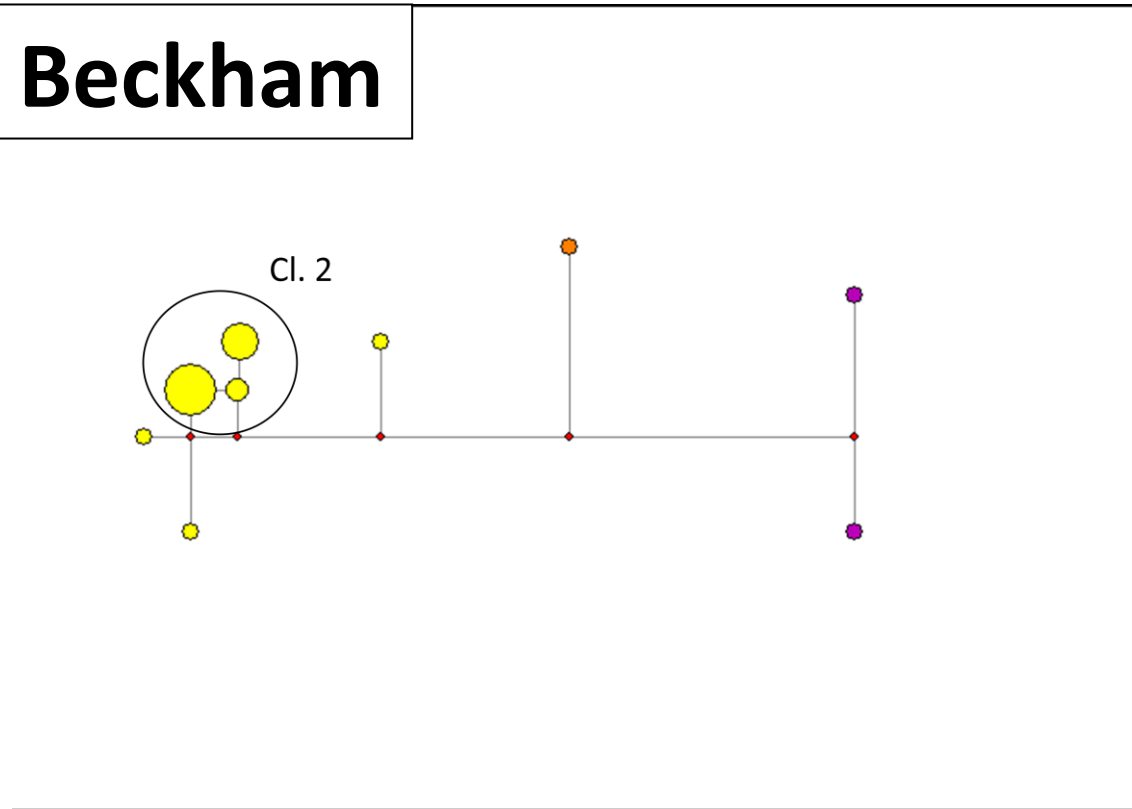
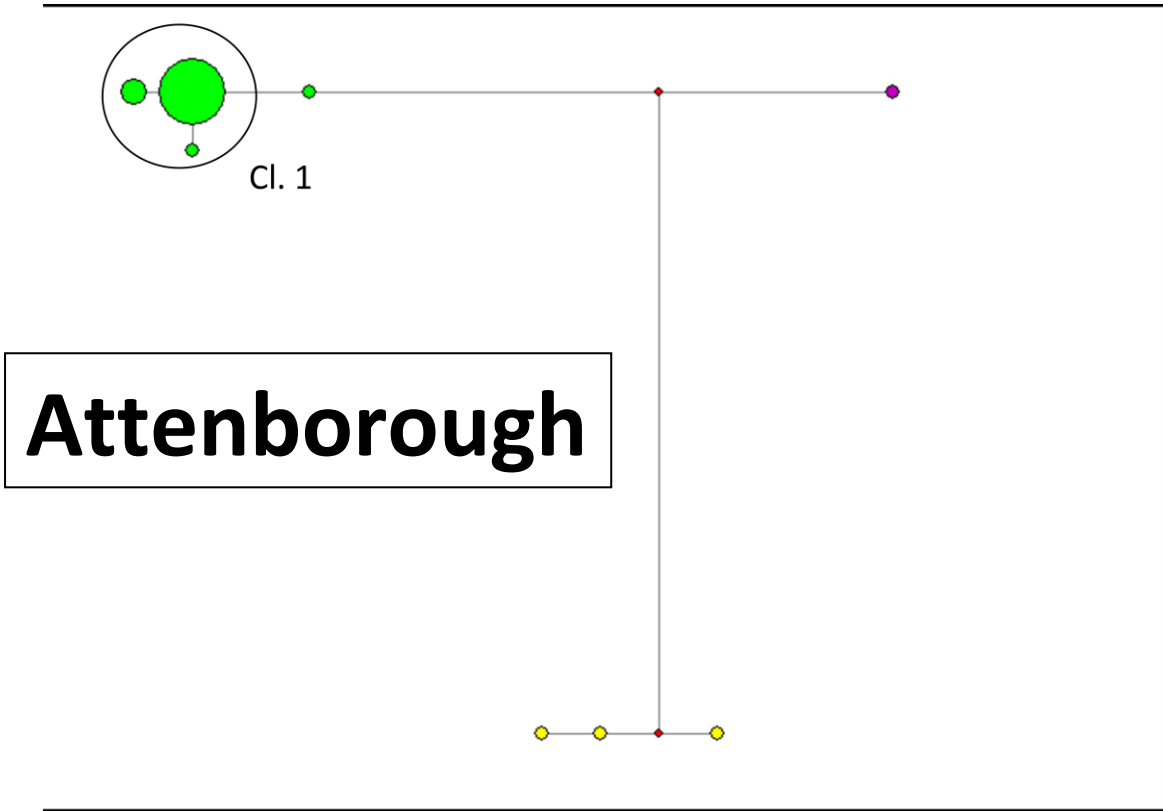
# Valbuena



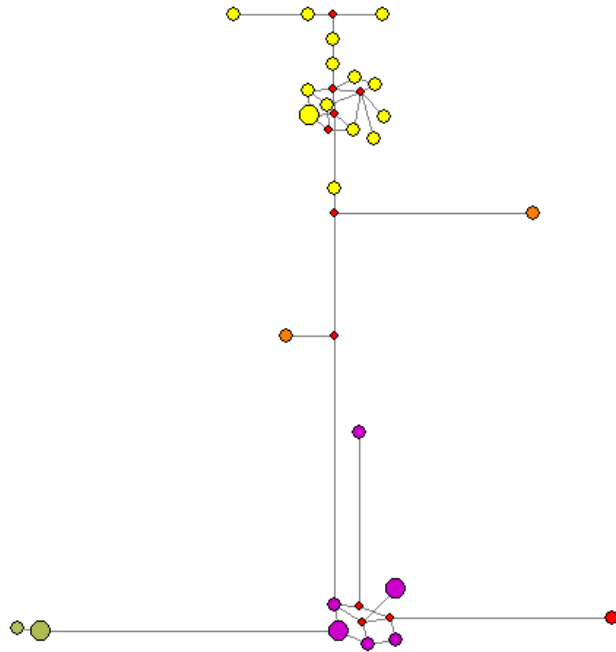
# Villarroel



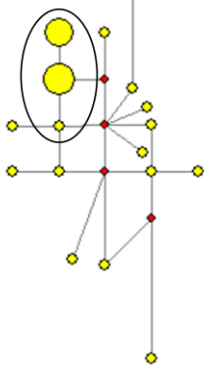
# ENGLAND



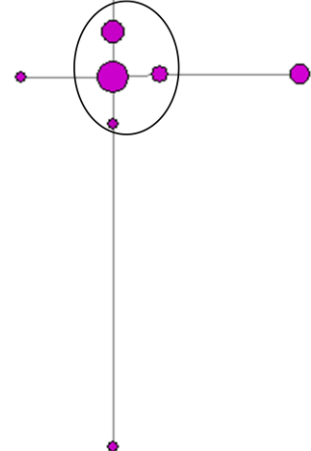
# Bray



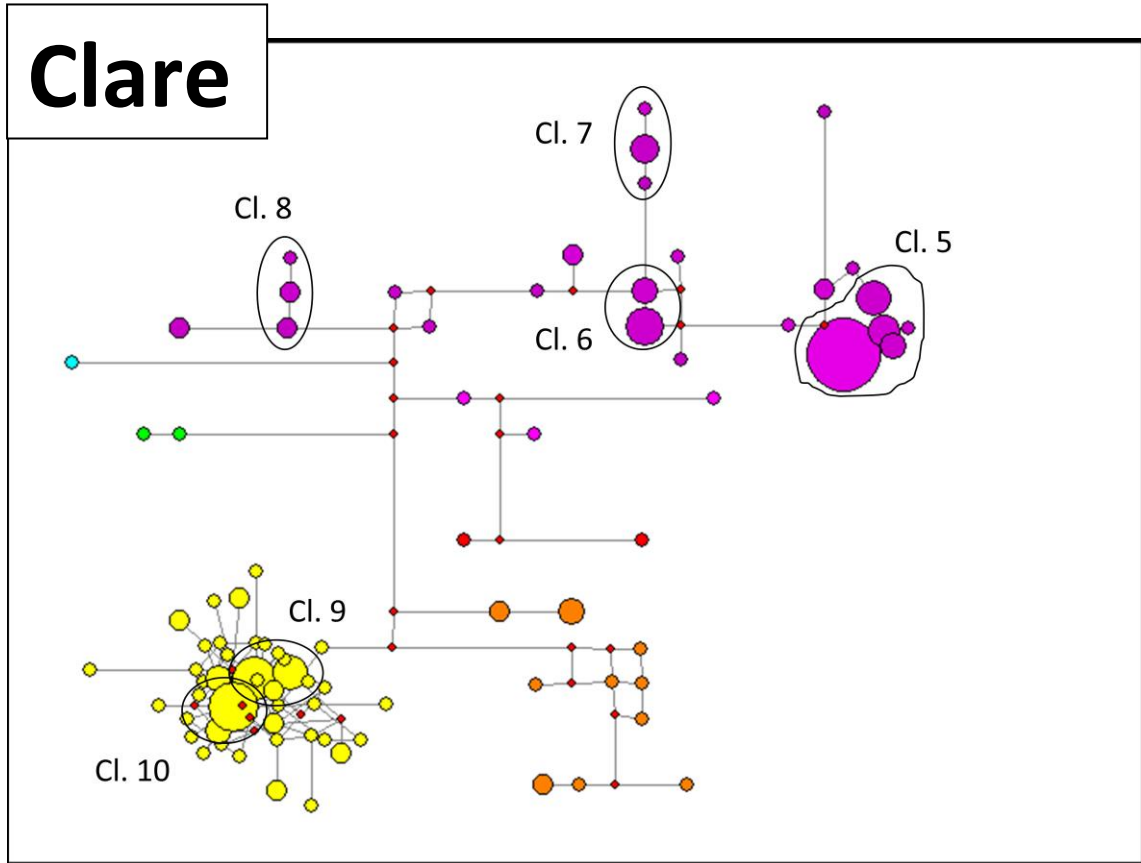
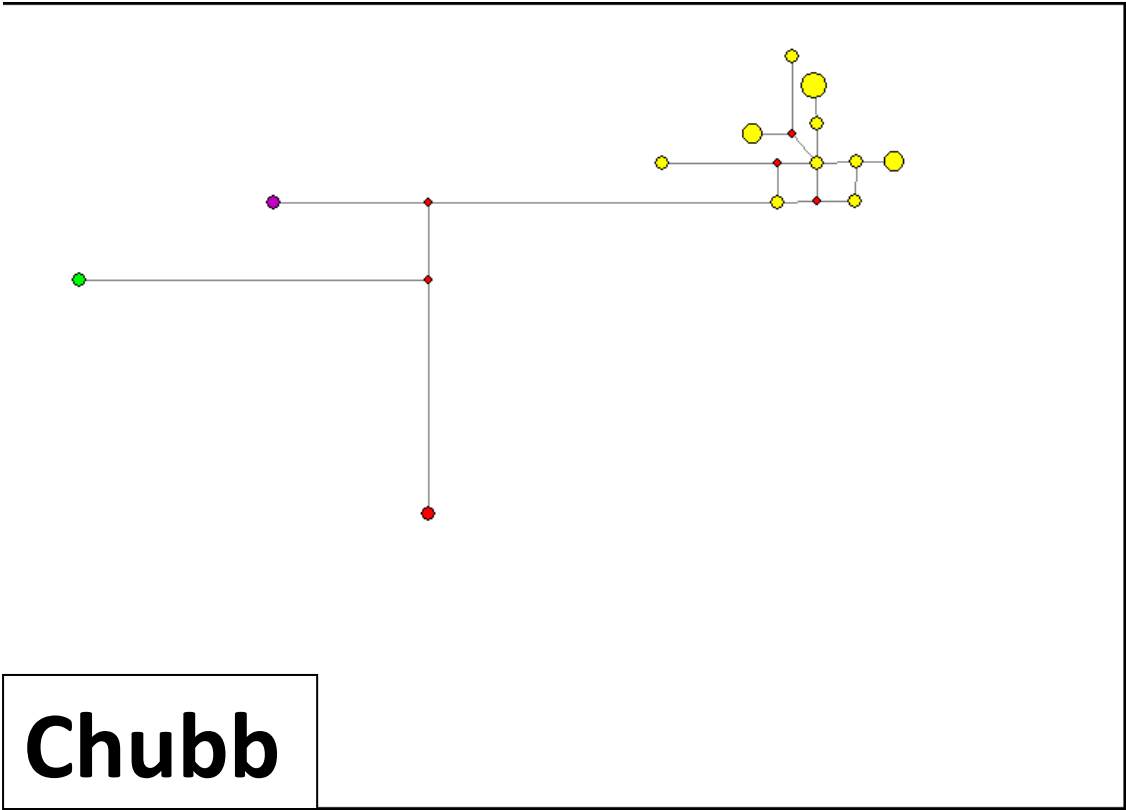
Cl. 4



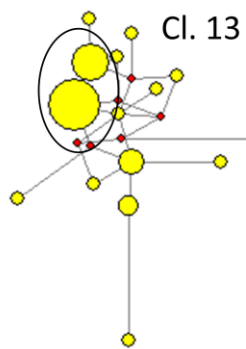
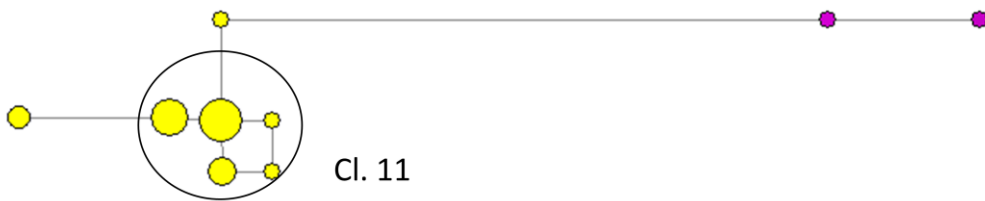
Cl. 3



# Butterfield



# Clemo



# Dalgleish

Cl. 12

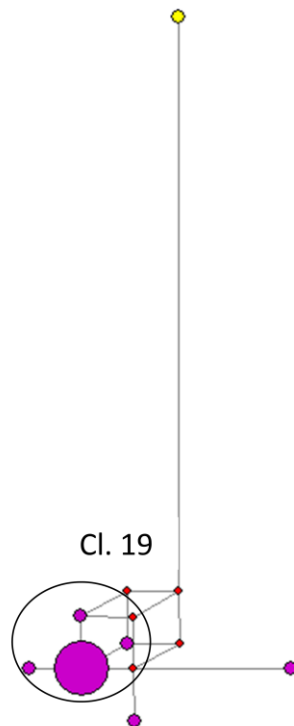




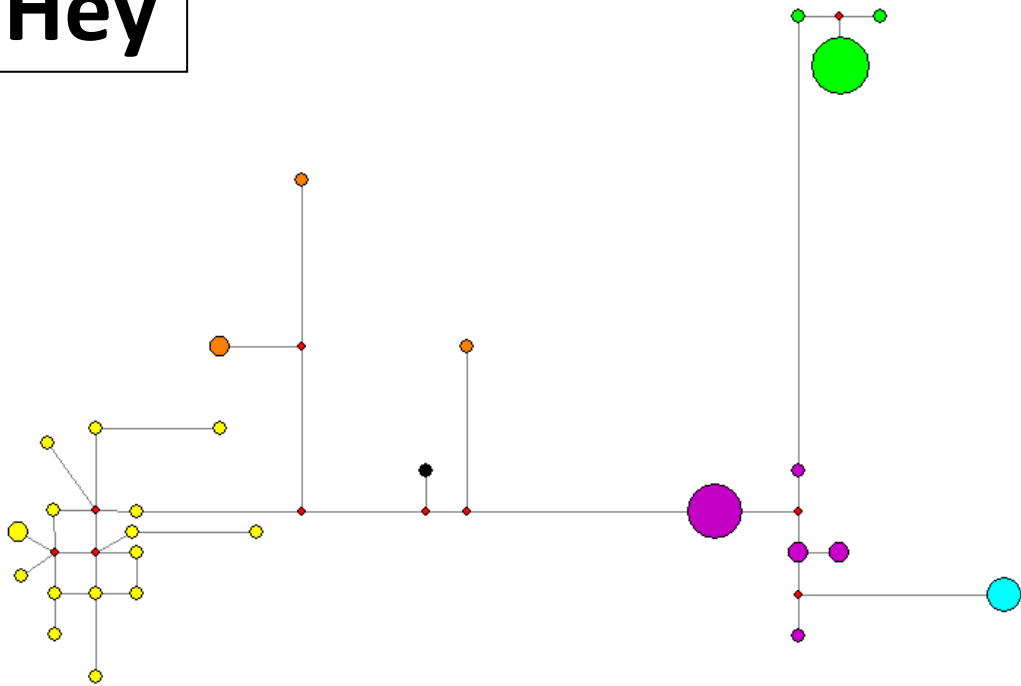
# Haythornthwaite



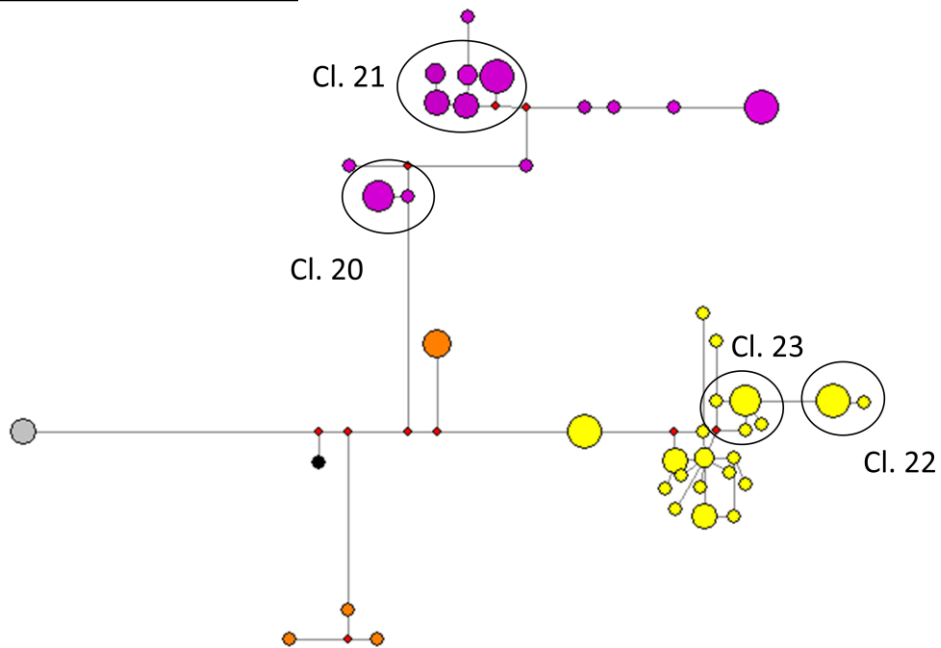
# Herrick



# Hey

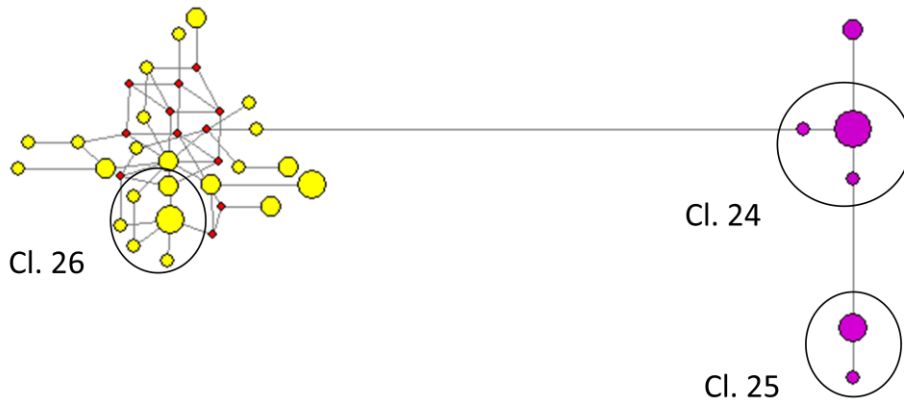


# Jefferson

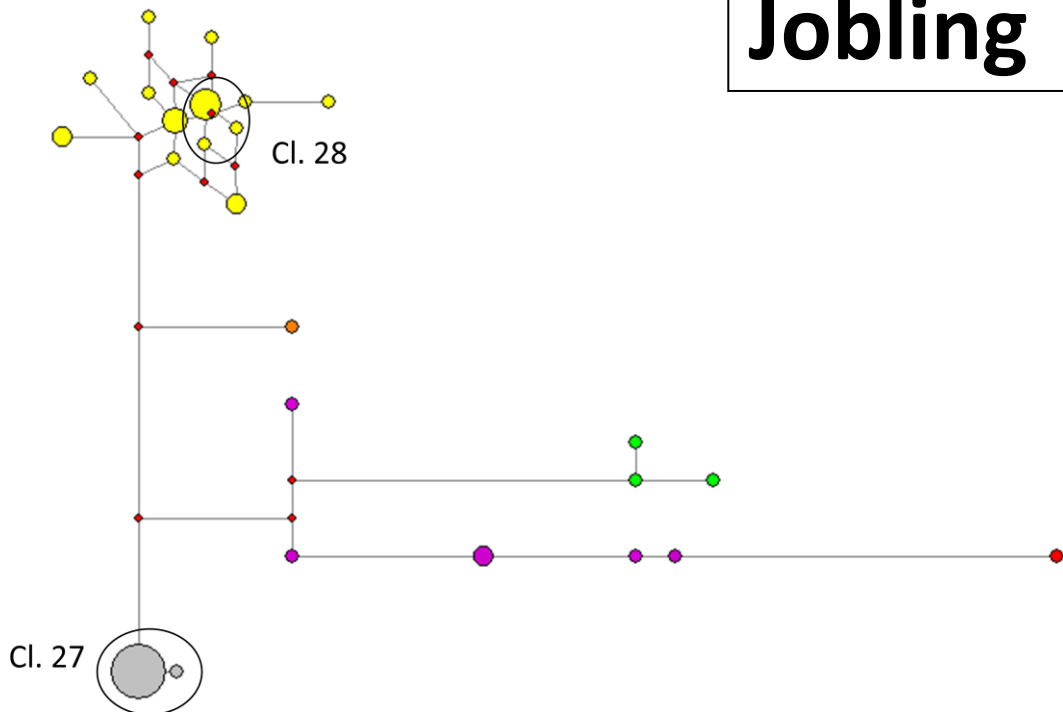




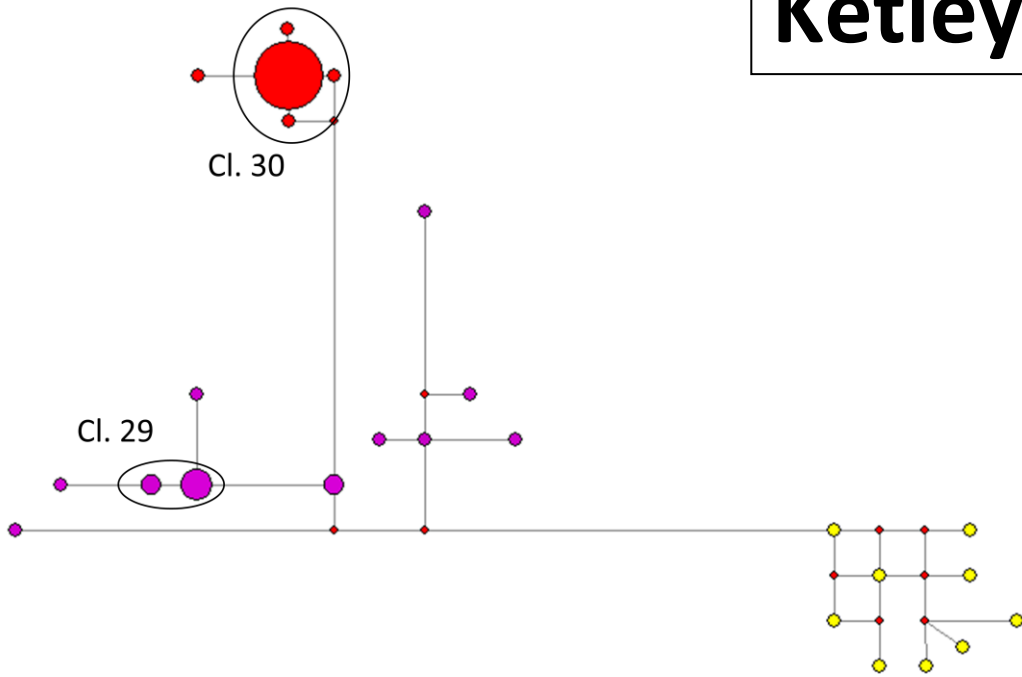
# Jeffreys



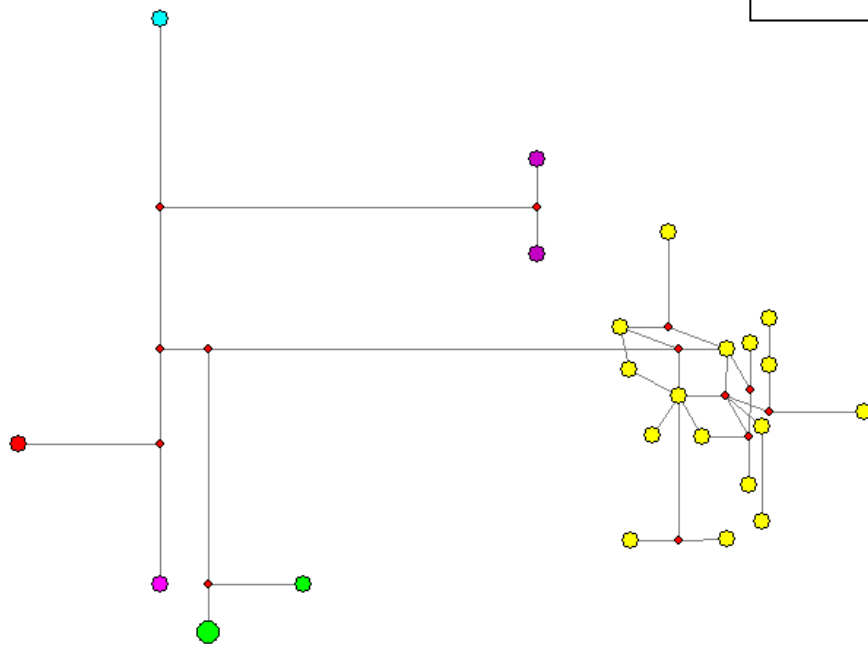
# Jobling



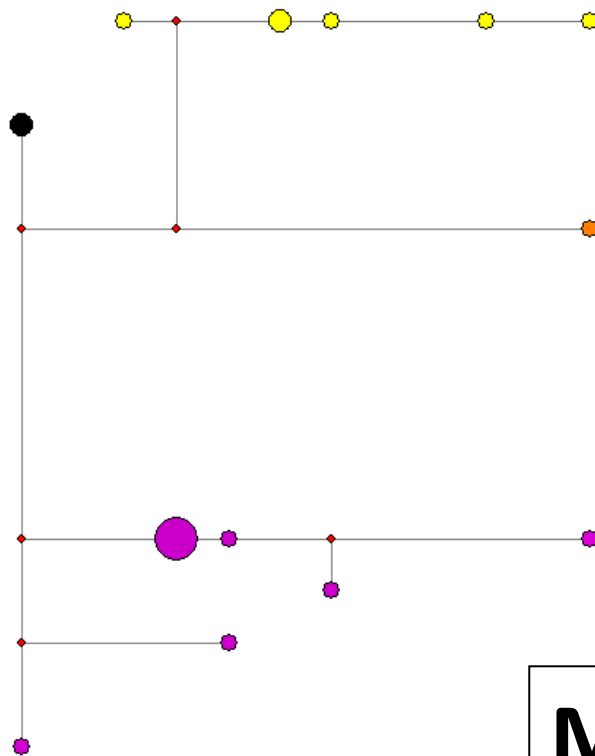
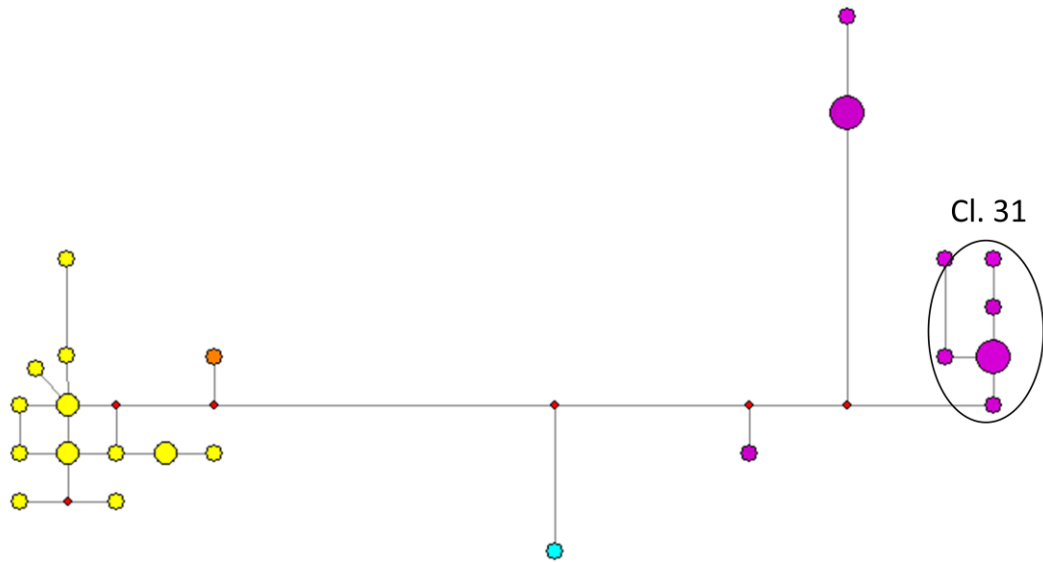
# Ketley



# King



**Lauder**

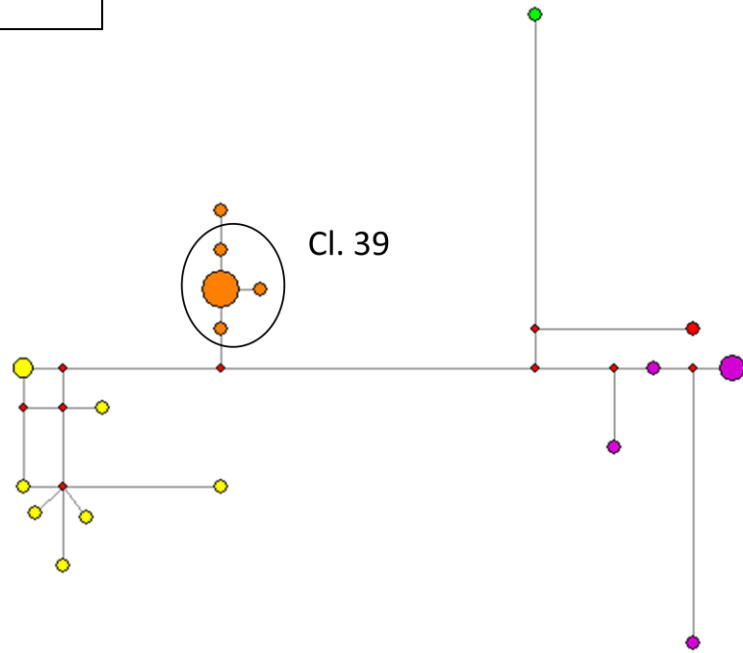


**Mallinson**

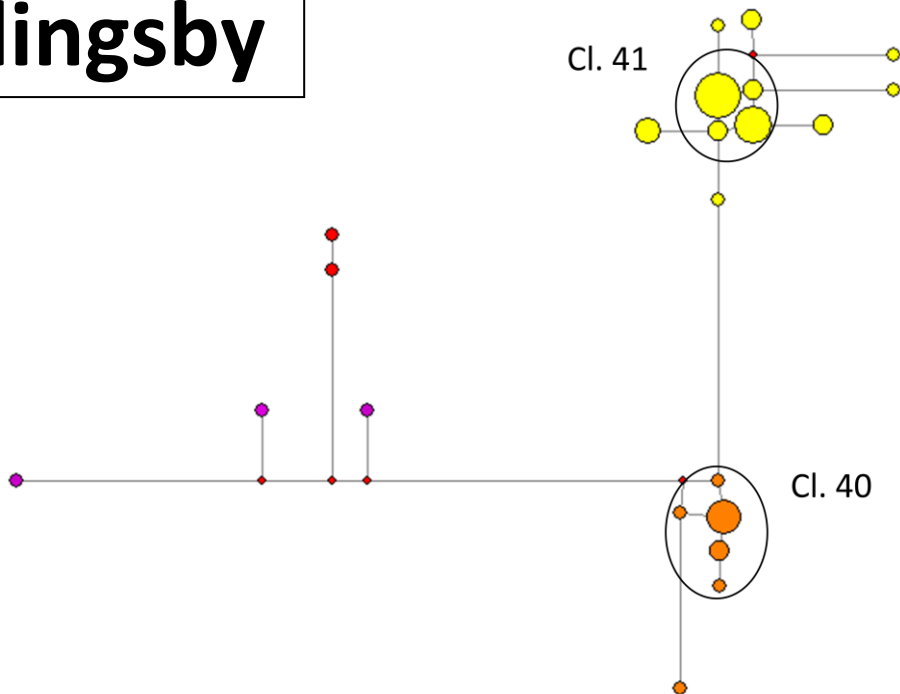


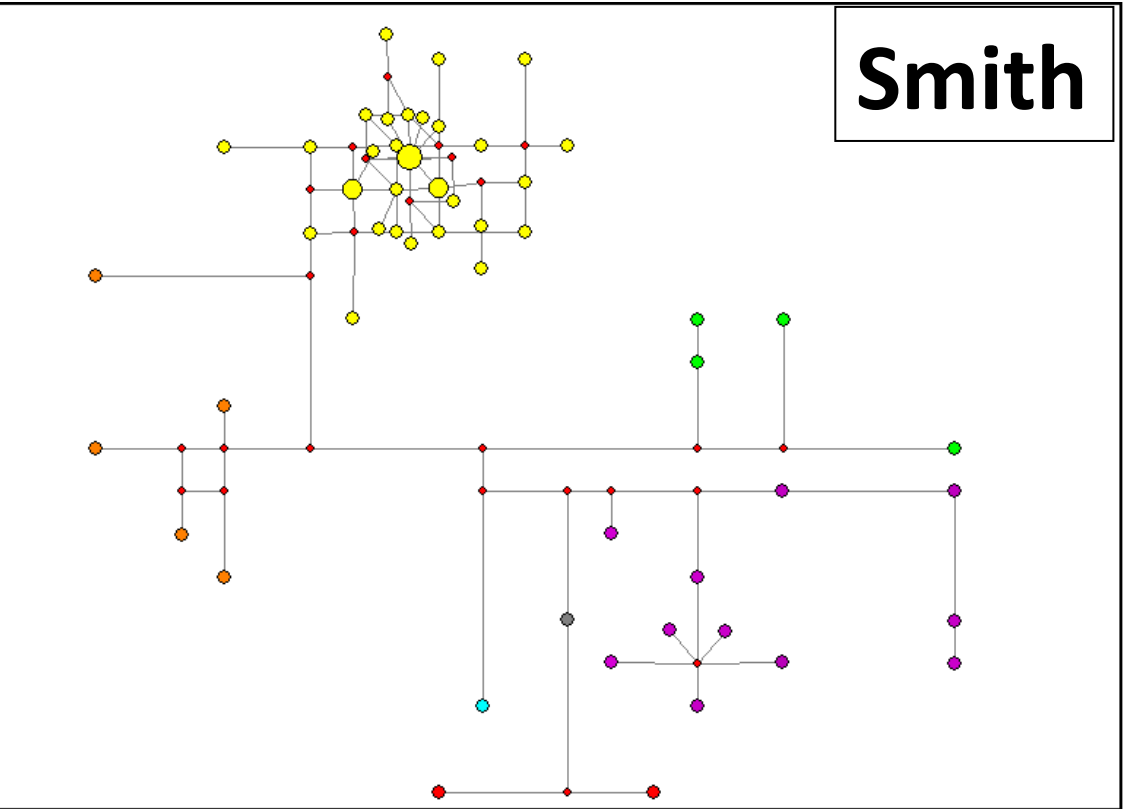
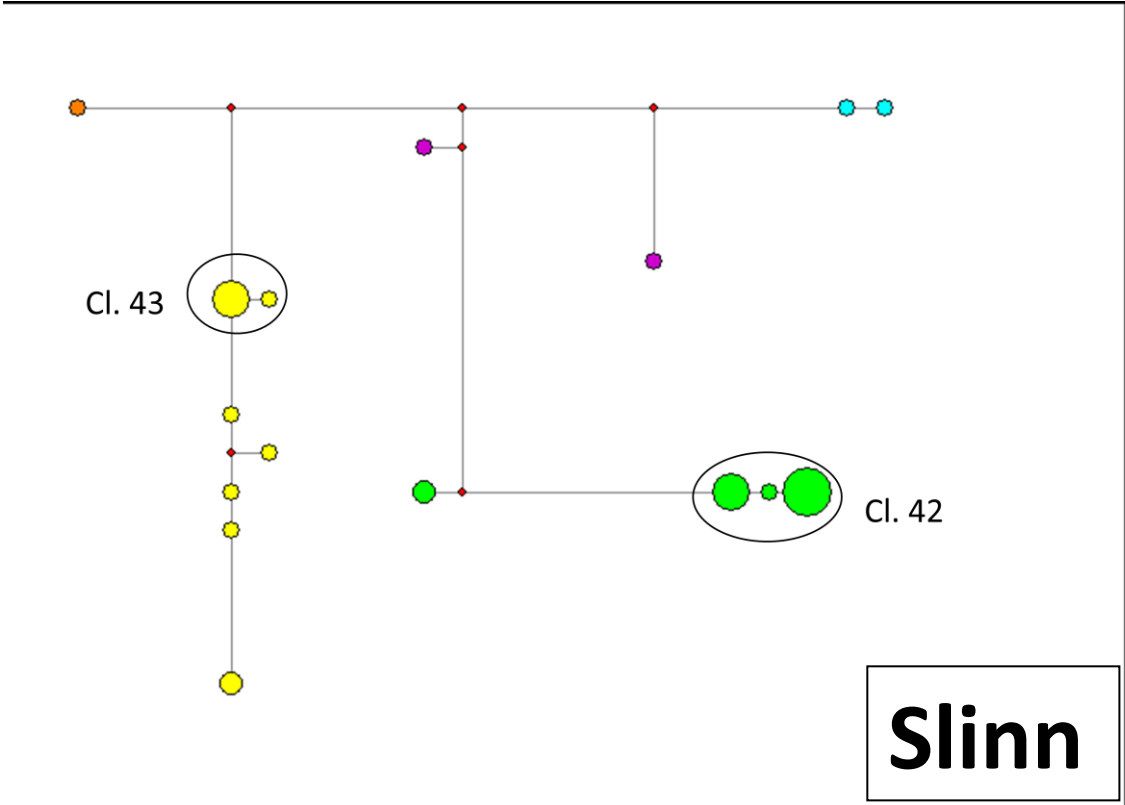


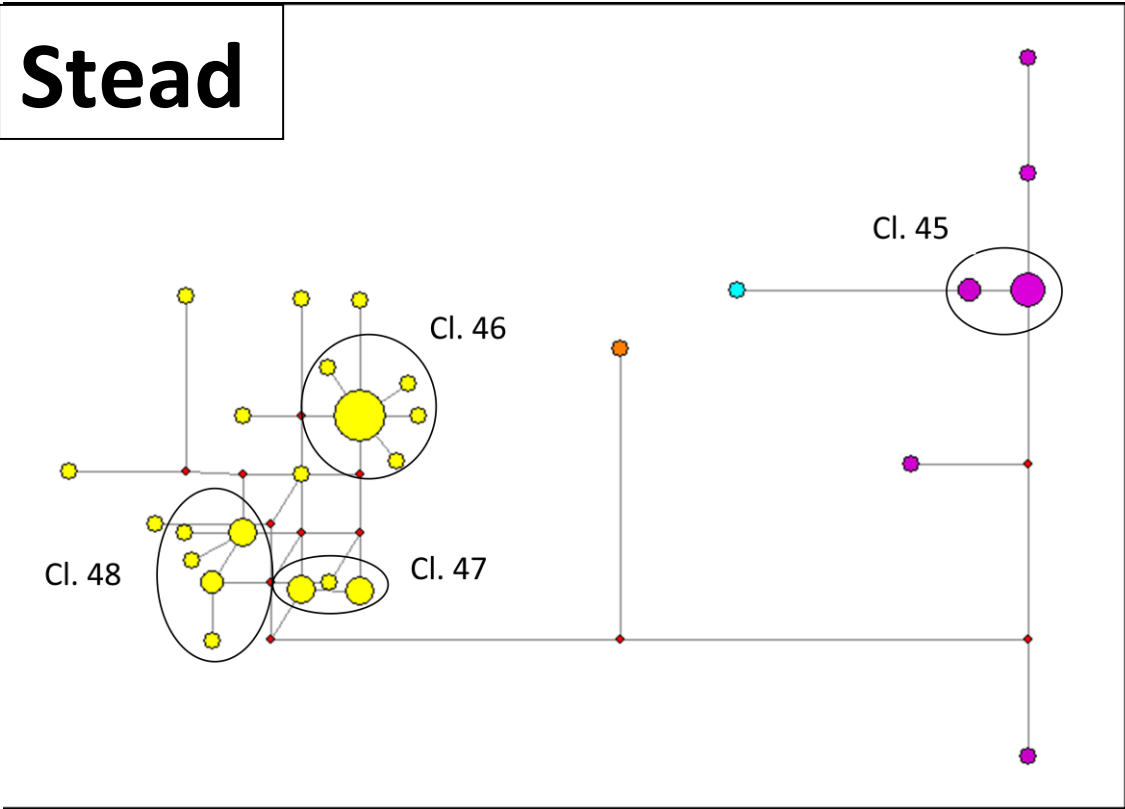
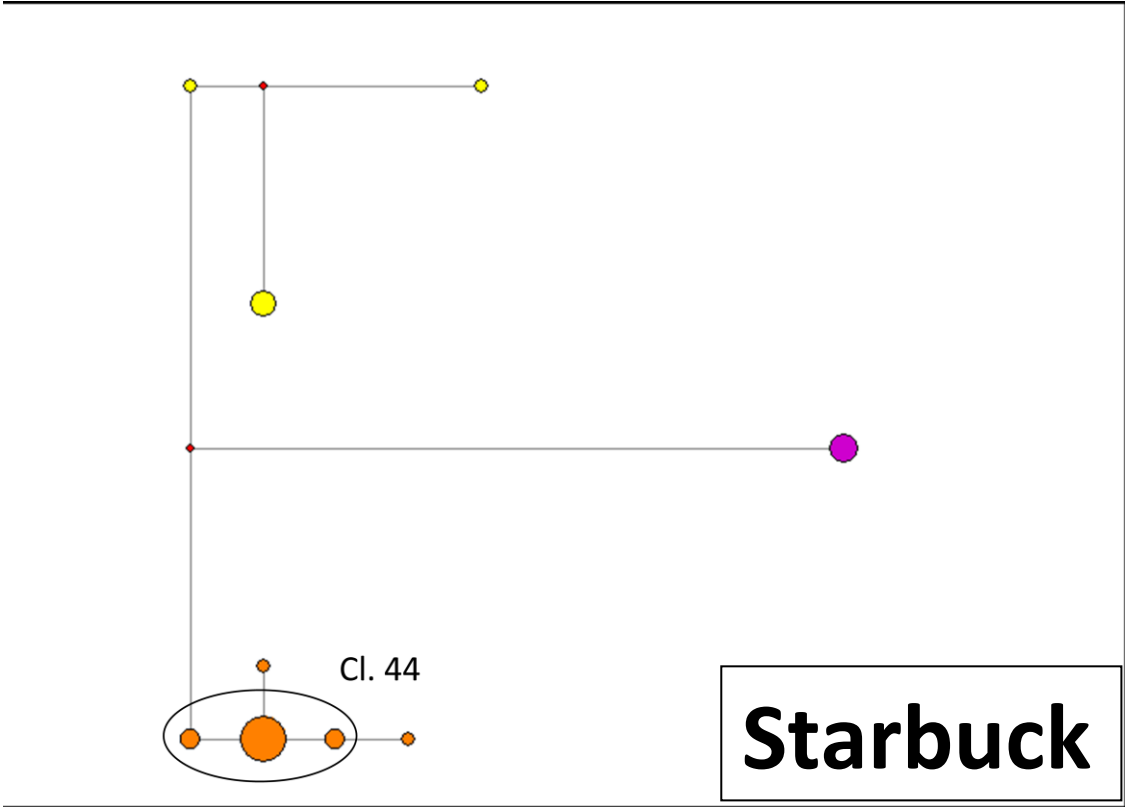
# Secker



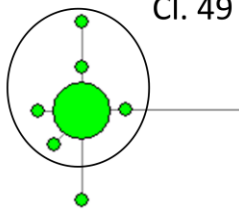
# Slingsby







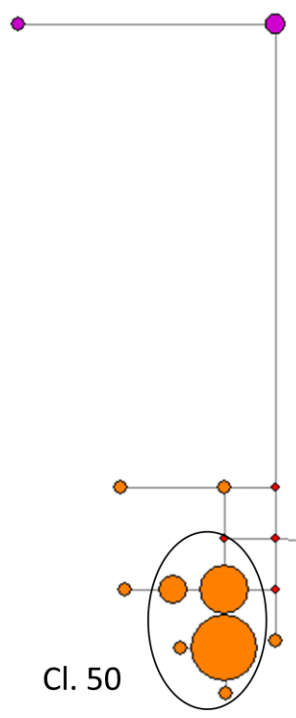




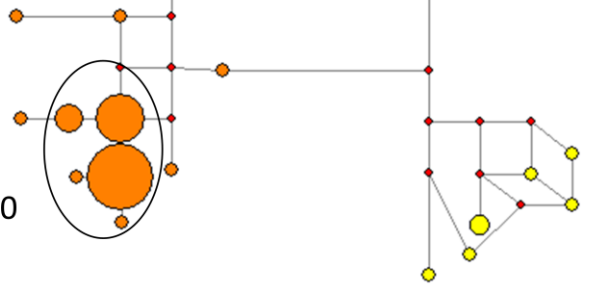
Cl. 49



# Stribling

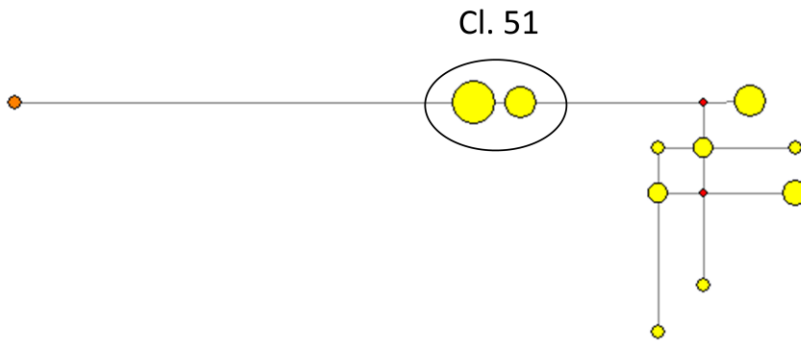


# Swindlehurst

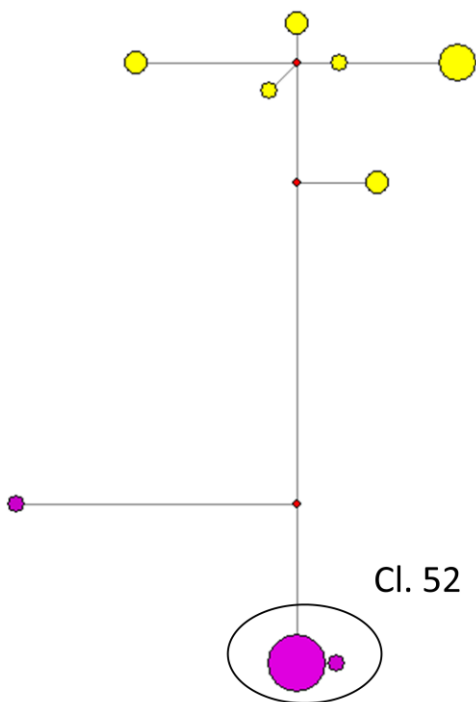


Cl. 50

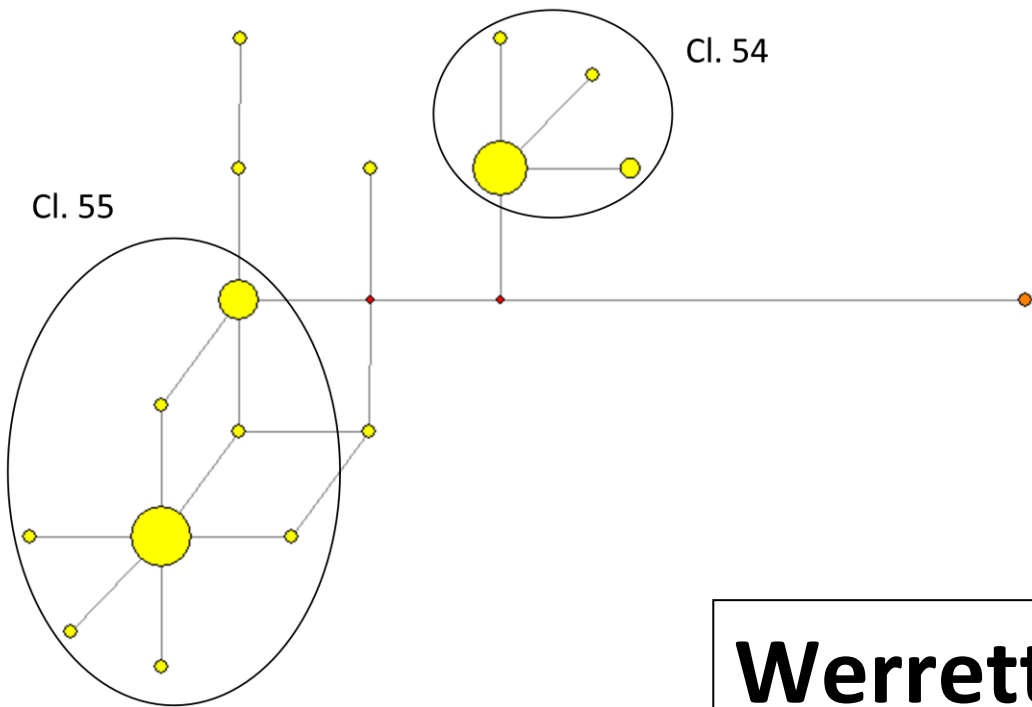
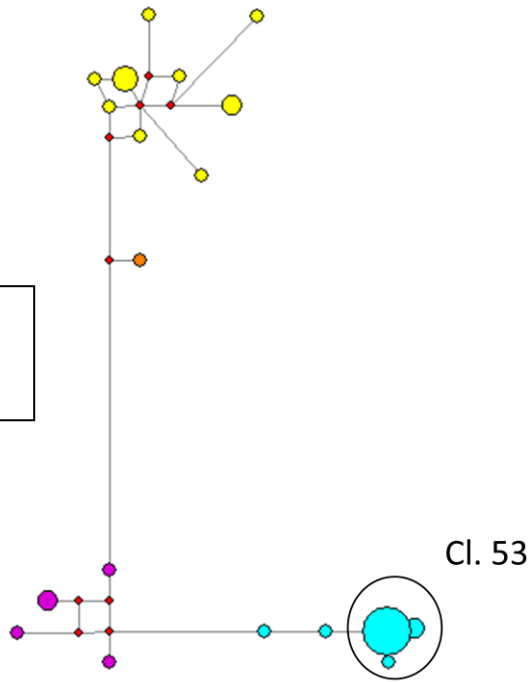
# Titchmarsh



# Titmus

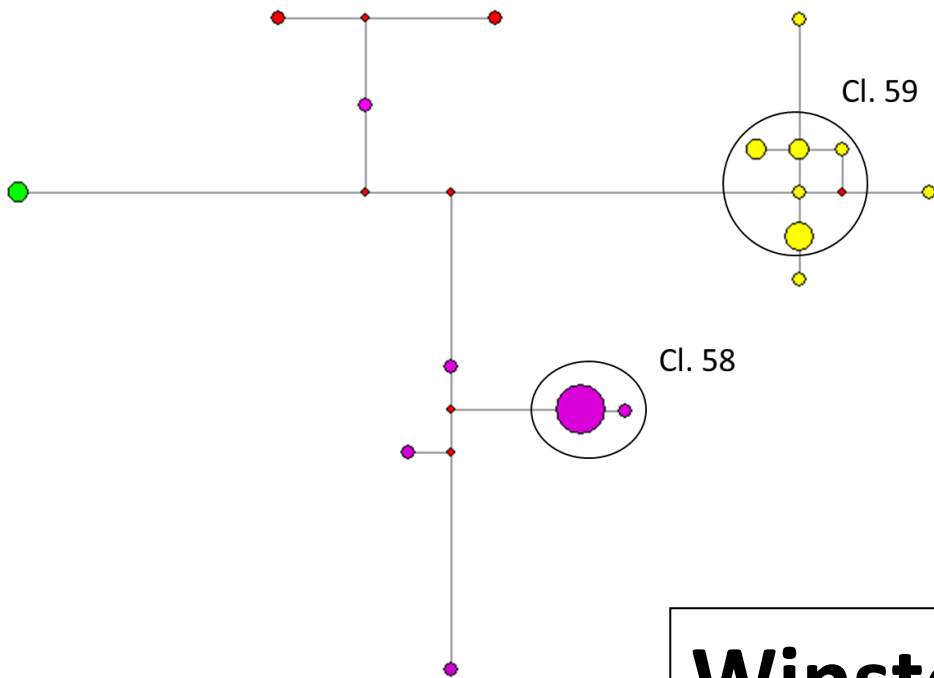
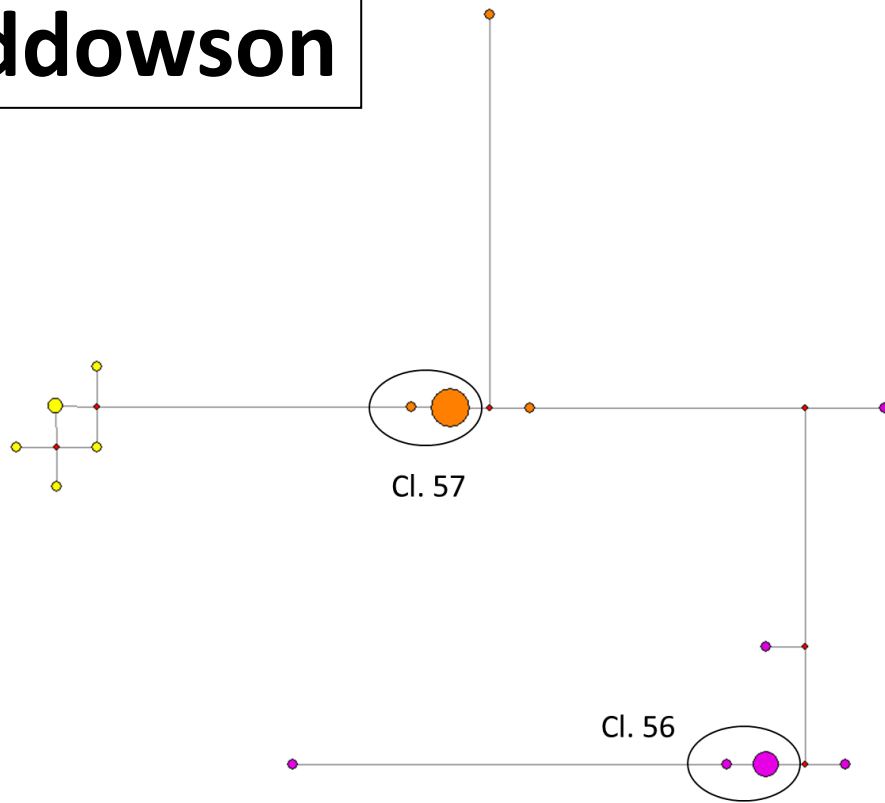


**Wadsworth**

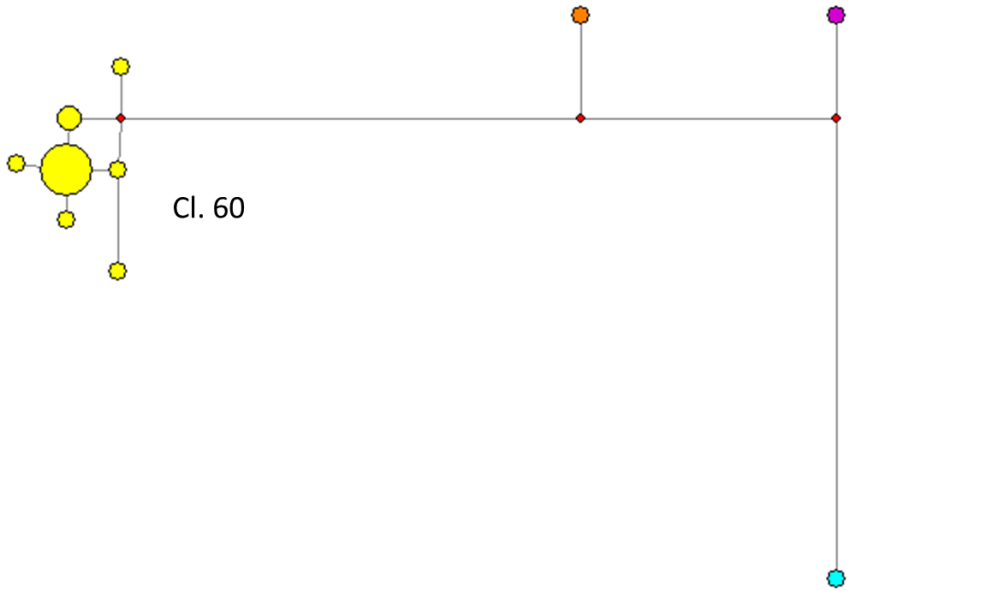


**Werrett**

# Widdowson

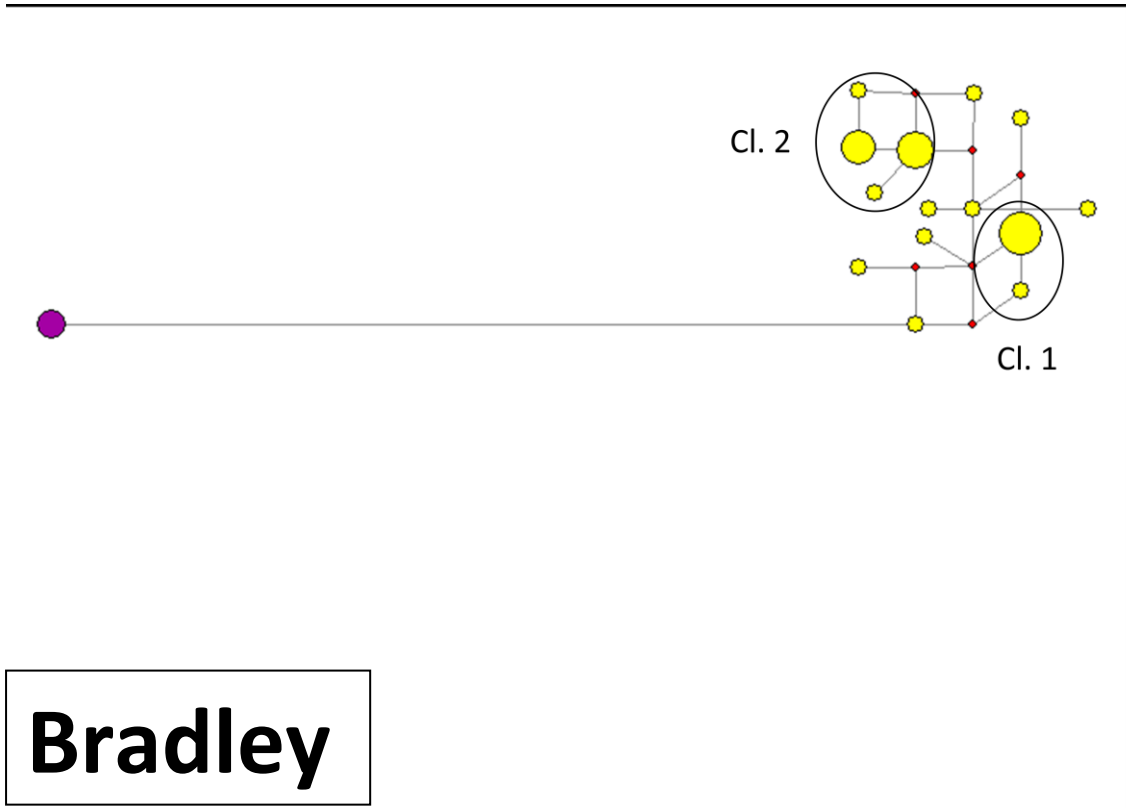


# Winstone

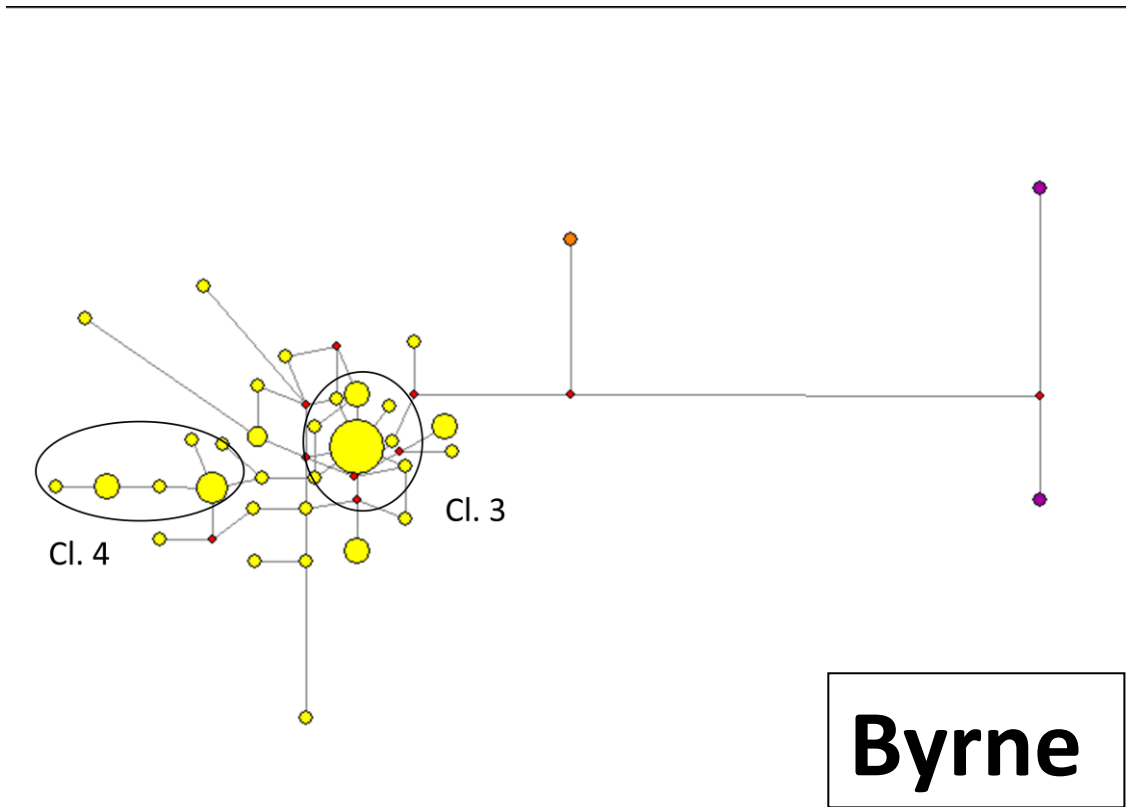


# Wordsworth

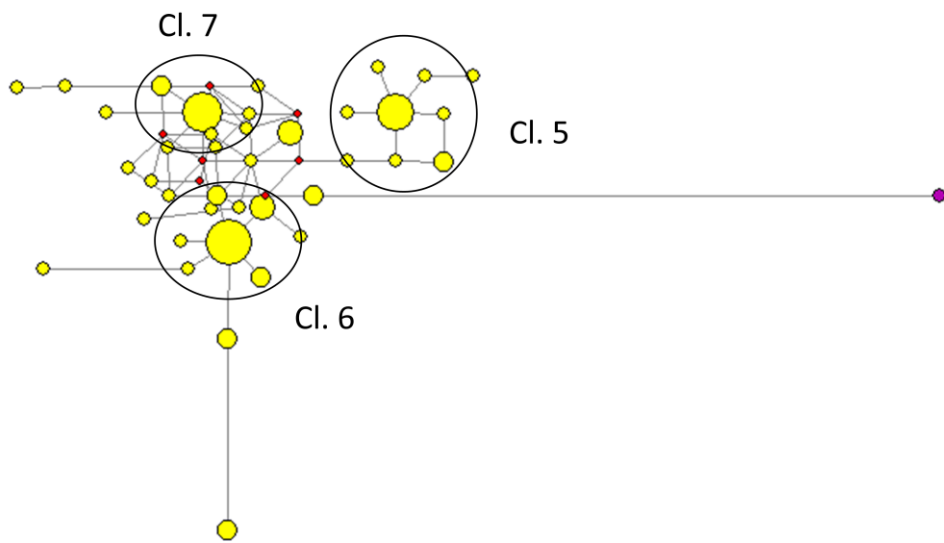
# IRELAND



**Bradley**

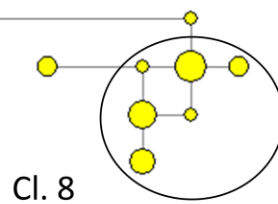


**Byrne**



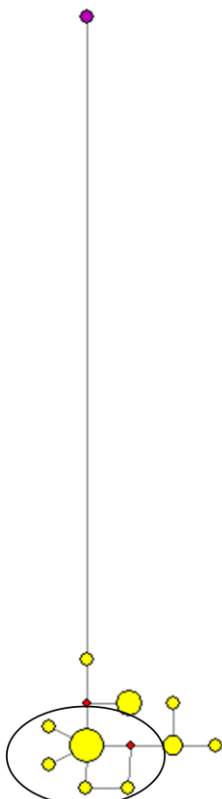
**Donohue**

**Egan**



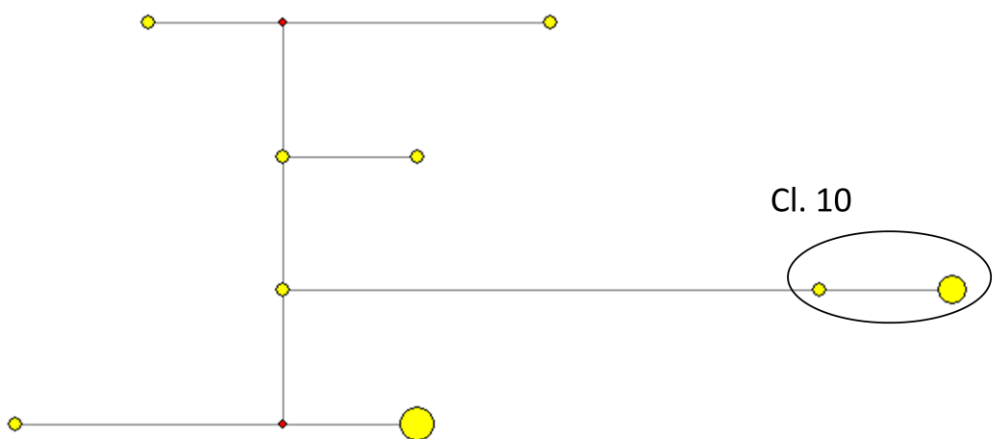
# Haughey

Cl. 9

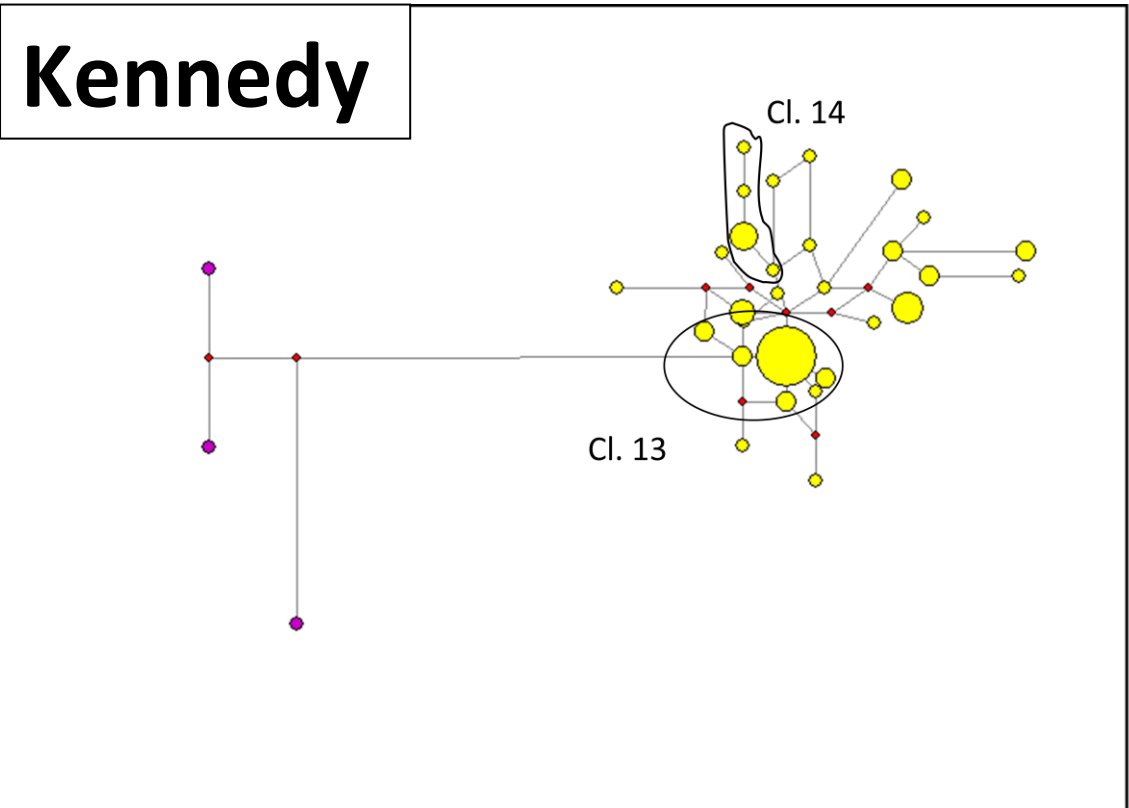
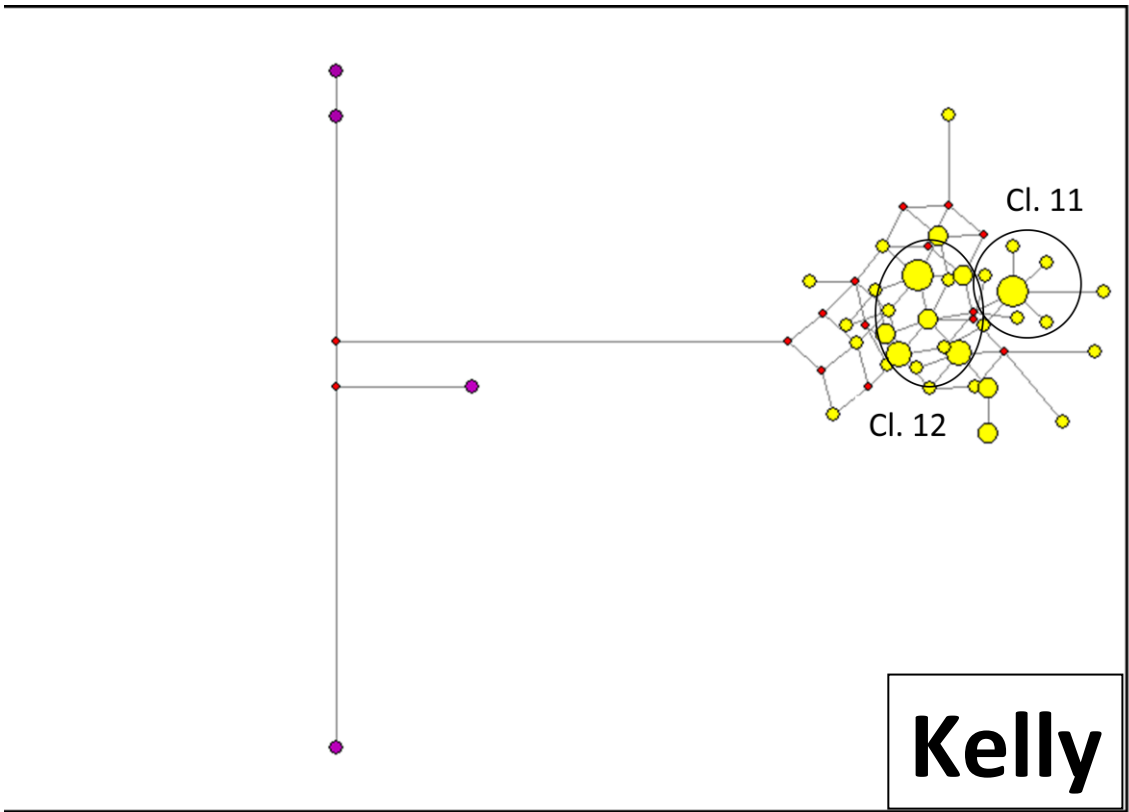


# Heaney

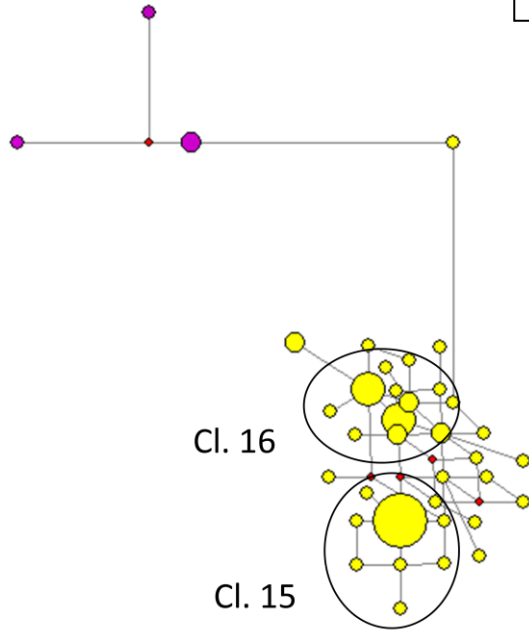
Cl. 10



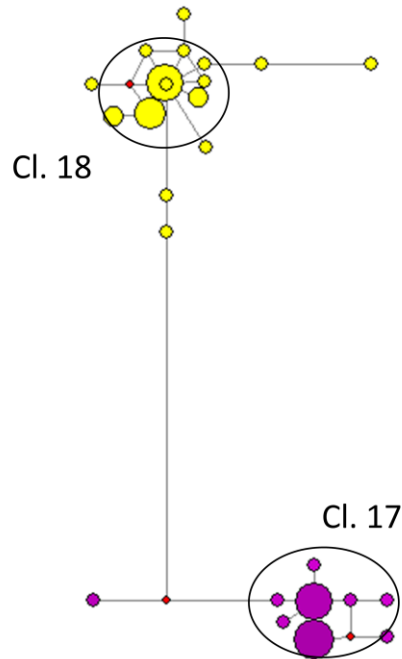




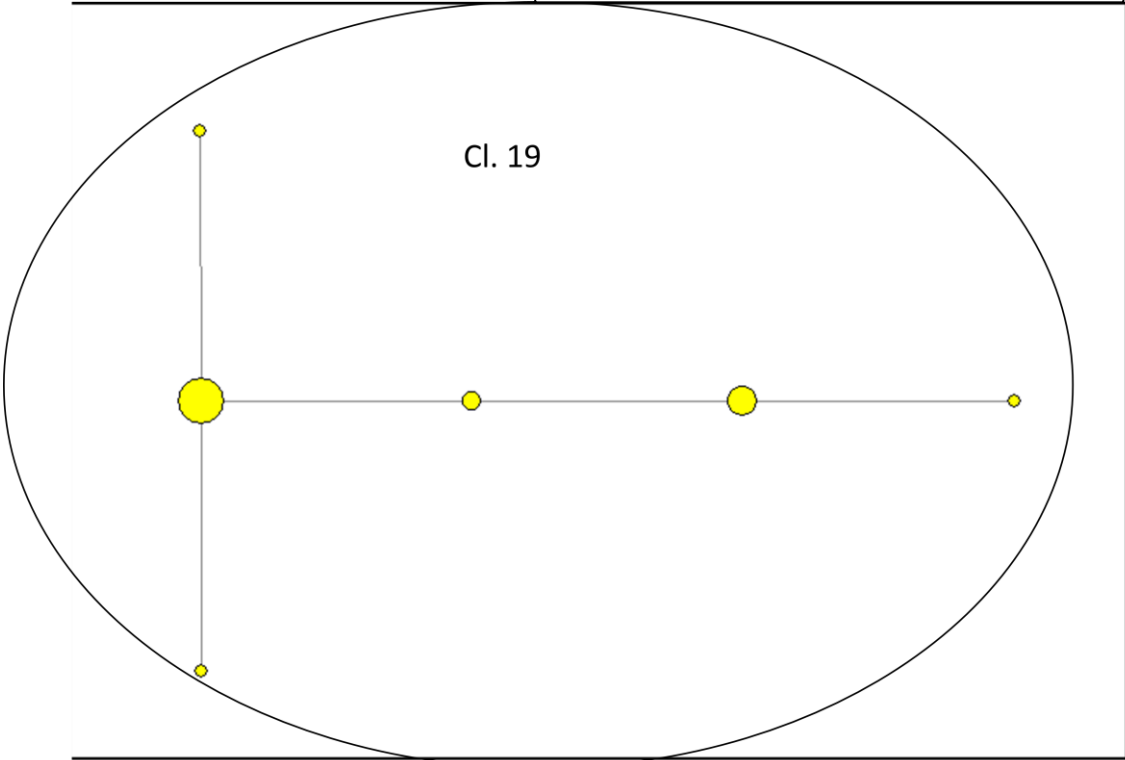
# McCarthy



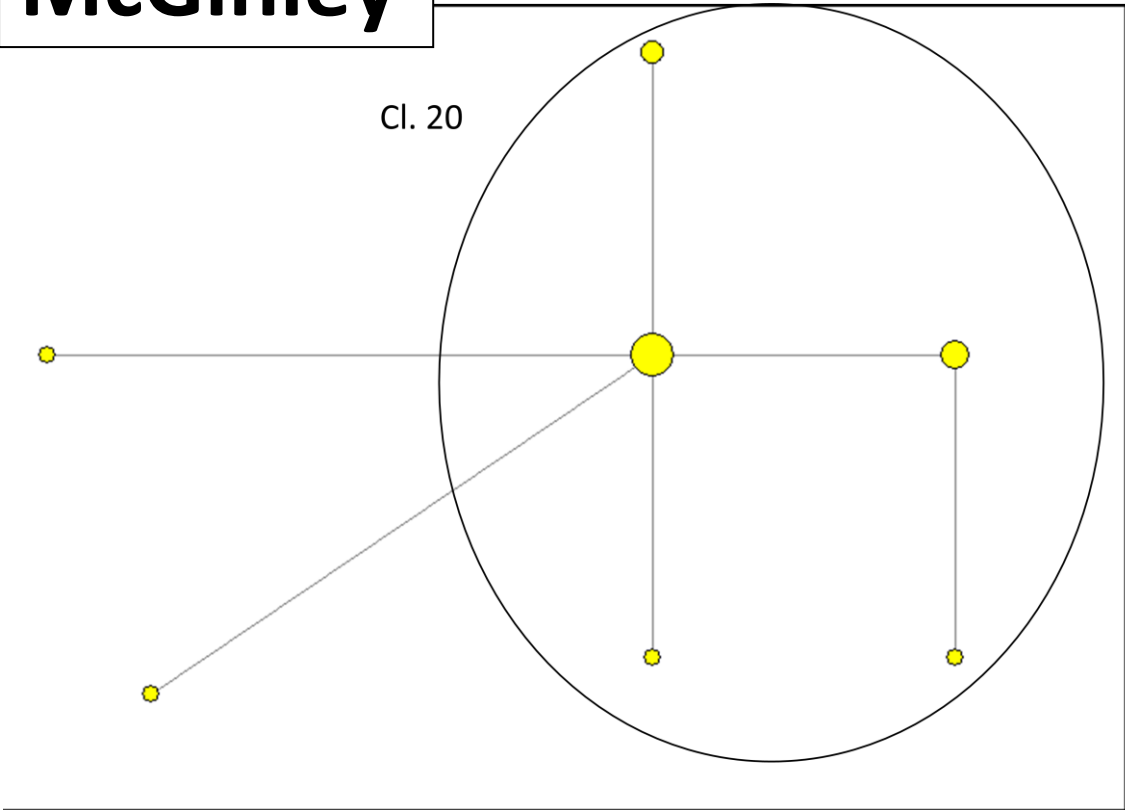
# McEvoy



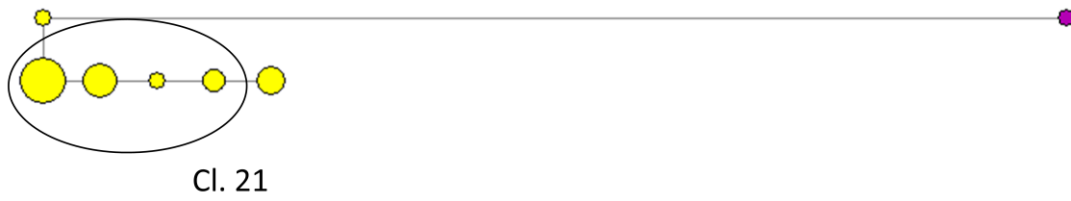
# McGillycuddy



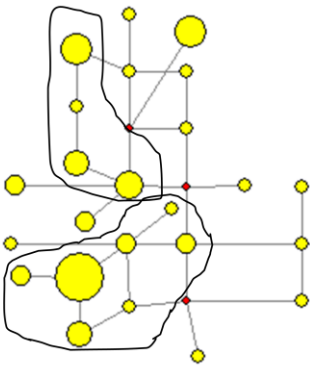
# McGinley



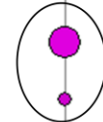
# McGinn



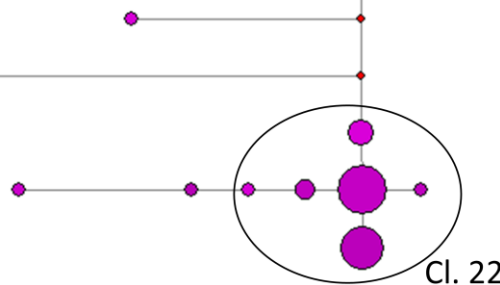
Cl. 26



Cl. 24



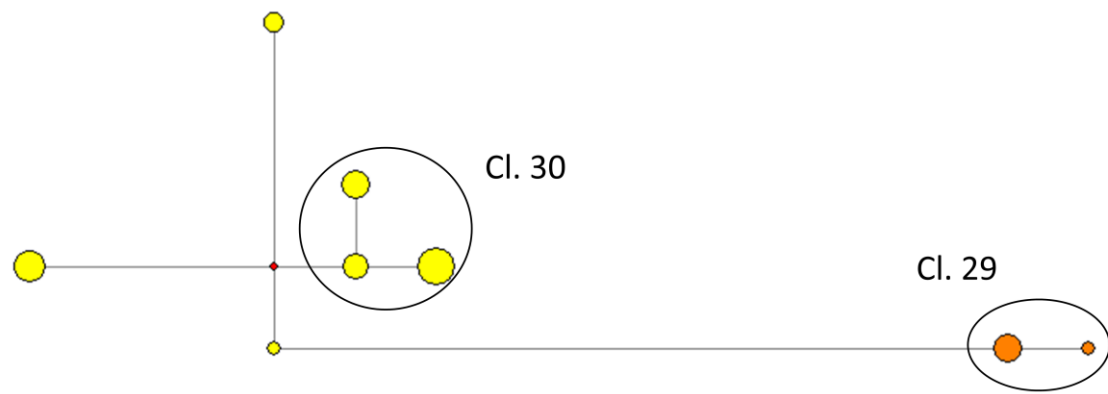
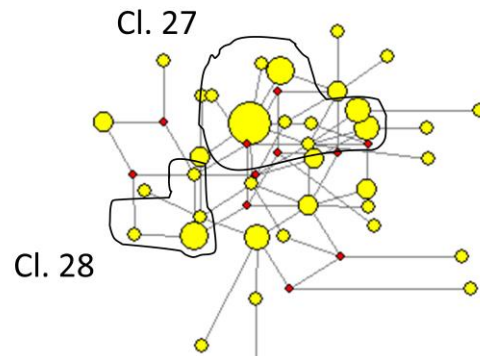
Cl. 23



Cl. 22

# McGuinness

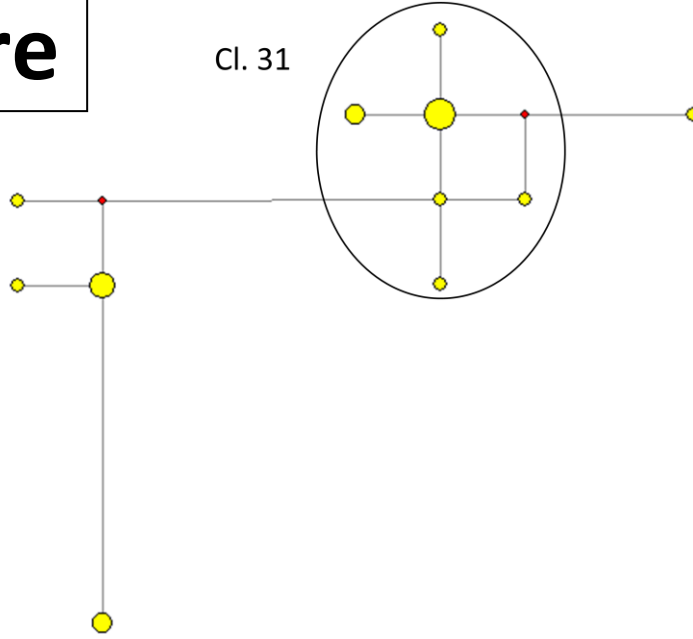
# Murphy



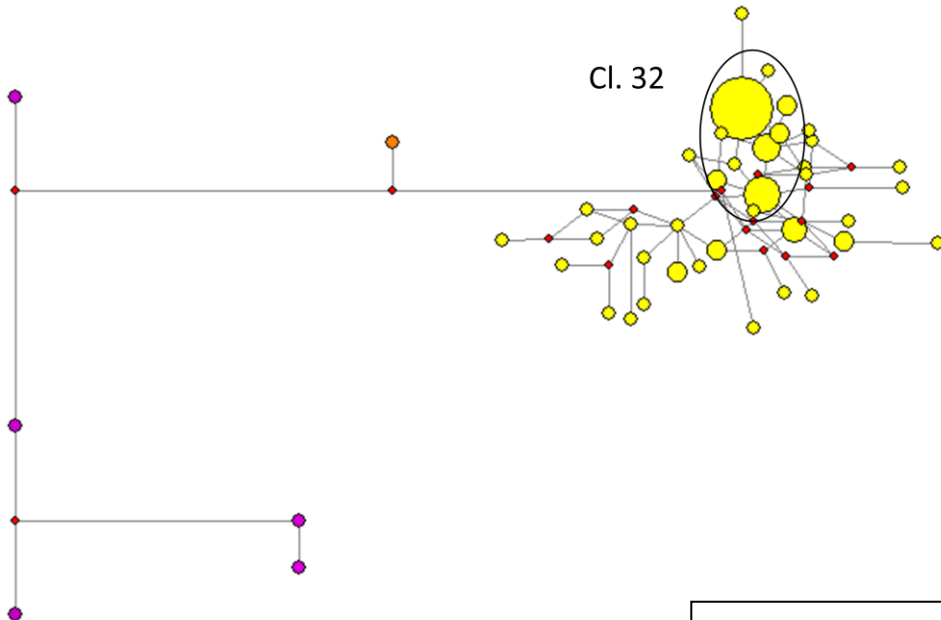
# O'Gara

**O'Hare**

Cl. 31

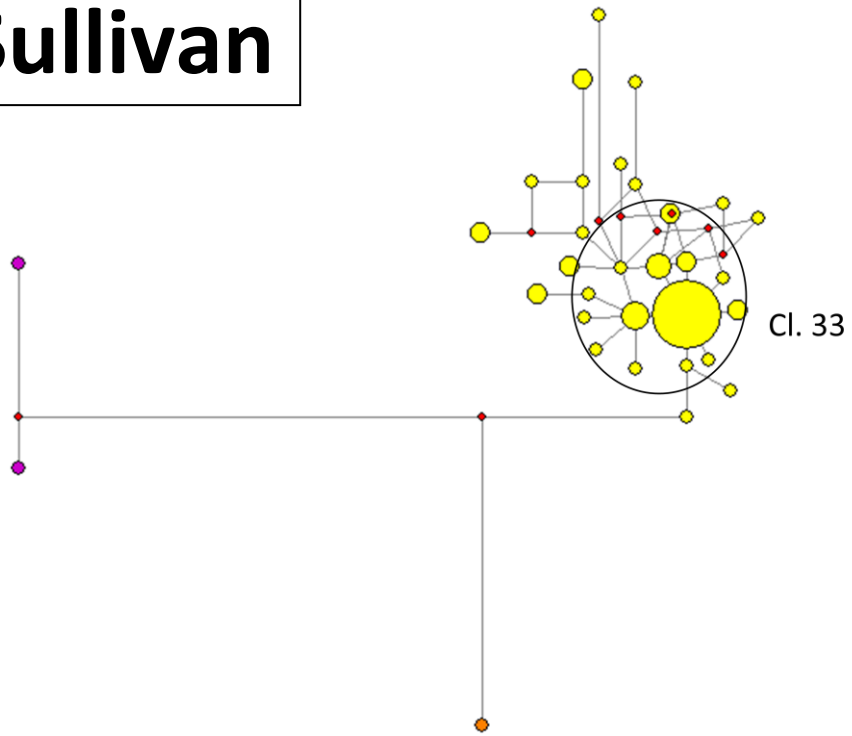


Cl. 32

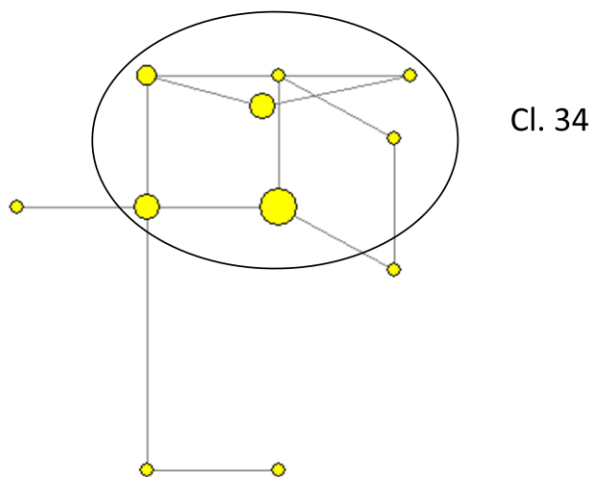


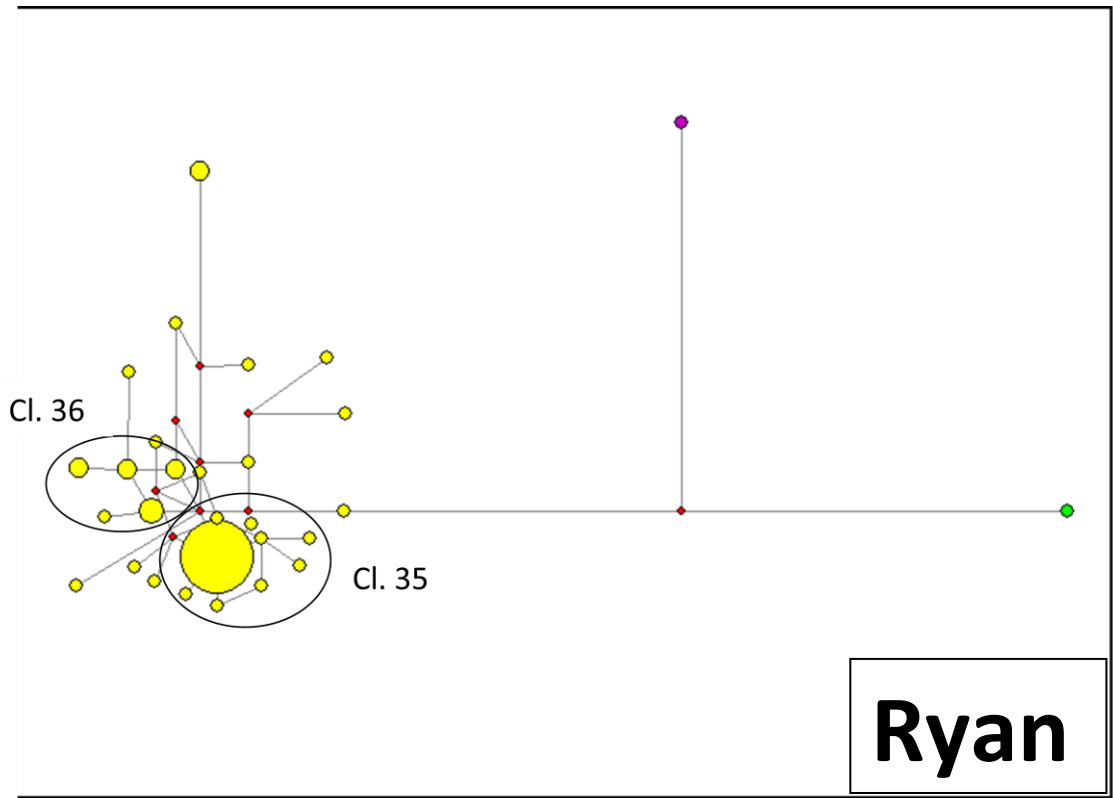
**O'Neill**

# O'Sullivan



# Rooney







**Table 1 Suppl. Material: Descent clusters and estimated ages. Comparative data: SPAIN**

Cluster	Surname	Men in cluster	oASD*	MRCA			TMRCA		
				T in gens.	95% CIs		31 y/gen	95% CIs	
					Lower	Upper		Lower	Upper
1	Albiol	28	0.114	<b>43.37</b>	29.06	61.62	<b>1344</b>	901	1910
2	Albiol	12	0.033	<b>12.65</b>	4.16	30.16	<b>392</b>	129	935
3	Alegre	15	0.047	<b>17.71</b>	7.74	35.30	<b>549</b>	240	1094
4	Alegre	8	0.025	<b>9.49</b>	1.97	32.98	<b>294</b>	61	1022
5	Andreu	7	0.057	<b>21.68</b>	7.07	56.08	<b>672</b>	219	1738
6	Andreu	12	0.067	<b>25.30</b>	11.58	49.08	<b>784</b>	359	1521
7	Ansotegui	8	0.013	<b>4.74</b>	0.75	23.43	<b>147</b>	23	726
8	Artola	12	0.042	<b>15.81</b>	6.10	34.74	<b>490</b>	189	1077
9	Artola	9	0.022	<b>8.43</b>	1.51	26.42	<b>261</b>	47	819
10	Baigorri	13	0.031	<b>11.68</b>	4.14	28.25	<b>362</b>	128	876
11	Balaguer	9	0.011	<b>4.22</b>	0.71	19.45	<b>131</b>	22	603
12	Bengoechea	12	0.05	<b>18.97</b>	8.27	41.87	<b>588</b>	256	1298
13	Bengoechea	6	0.017	<b>6.32</b>	0.99	30.15	<b>196</b>	31	935
14	Benasar	18	0.039	<b>14.76</b>	6.25	28.82	<b>457</b>	194	893
15	Bibiloni	15	0.033	<b>12.65</b>	4.88	28.10	<b>392</b>	151	871
16	Boluda	17	0.035	<b>13.39</b>	5.40	28.22	<b>415</b>	167	875
17	Cadenas	21	0.086	<b>32.53</b>	19.00	52.93	<b>1008</b>	589	1641
18	Cadenas	10	0.11	<b>41.74</b>	21.18	76.25	<b>1294</b>	657	2364
19	Castell	28	0.032	<b>12.20</b>	5.95	22.68	<b>378</b>	184	703
20	Castell	9	0.056	<b>21.08</b>	8.07	48.10	<b>654</b>	250	1491
21	Gordon	10	0.01	<b>3.80</b>	0.65	16.23	<b>118</b>	20	503
22	Gordon	14	0.114	<b>43.37</b>	24.75	72.86	<b>1344</b>	767	2259
23	Granell	29	0.014	<b>5.23</b>	1.66	12.59	<b>162</b>	51	390
24	Herrero	5	0.02	<b>7.59</b>	1.34	40.38	<b>235</b>	41	1252
25	Huguet	16	0.063	<b>23.72</b>	11.95	42.15	<b>735</b>	370	1307
26	Japon	14	0.014	<b>5.42</b>	1.17	18.23	<b>168</b>	36	565
27	Juarez	15	0.067	<b>25.30</b>	12.22	46.31	<b>784</b>	379	1436
28	Mateos	7	0.057	<b>21.68</b>	7.13	52.00	<b>672</b>	221	1612
29	Mateos	5	0.04	<b>15.18</b>	3.19	49.96	<b>471</b>	99	1549
30	Mateos	8	0.05	<b>18.97</b>	6.53	46.32	<b>588</b>	203	1436
31	Mateos	7	0.086	<b>32.53</b>	13.38	71.58	<b>1008</b>	415	2219
32	Moliner	13	0.054	<b>20.43</b>	8.72	41.66	<b>633</b>	270	1291
33	Moliner	4	0.025	<b>9.49</b>	1.47	45.27	<b>294</b>	46	1403
34	Moliner	17	0.088	<b>33.48</b>	18.82	56.04	<b>1038</b>	583	1737
35	Olaizola	33	0.021	<b>8.05</b>	3.47	16.13	<b>250</b>	108	500
36	Pascual	9	0.044	<b>16.87</b>	5.44	40.14	<b>523</b>	169	1244
37	Quevedo	5	0.02	<b>7.59</b>	1.33	33.30	<b>235</b>	41	1032
38	Quevedo	9	0.067	<b>25.30</b>	10.85	54.63	<b>784</b>	336	1694
39	Renau	23	0.035	<b>13.20</b>	6.31	25.44	<b>409</b>	195	789
40	Renau	7	0.029	<b>10.84</b>	2.31	34.72	<b>336</b>	71	1076
41	Renau	7	0.043	<b>16.26</b>	4.11	45.46	<b>504</b>	128	1409
42	Renau	8	0.062	<b>23.35</b>	10.74	47.01	<b>724</b>	333	1424

Cluster	Surname	Men in cluster	oASD*	MRCA	95% CIs		TMRCA	95% CIs	
				T in gens.	Lower	Upper	31 y/gen	Lower	Upper
43	Ribalta	12	0.083	<b>31.62</b>	16.22	58.39	<b>980</b>	503	1810
44	Ribalta	20	0.035	<b>13.28</b>	5.79	26.33	<b>412</b>	179	816
45	Tirado	10	0.05	<b>18.97</b>	6.91	55.01	<b>588</b>	214	1705
46	Valbuena	27	0.063	<b>23.89</b>	14.16	38.13	<b>741</b>	439	1182
47	Valbuena	8	0.025	<b>9.49</b>	1.91	30.55	<b>294</b>	59	947
48	Villarroel	16	0.025	<b>9.49</b>	3.41	22.89	<b>294</b>	106	710
49	Villarroel	8	0.013	<b>4.74</b>	0.82	22.66	<b>147</b>	26	702
<b>Avg.</b>				<b>17.30</b>	7.37	39.12	<b>536</b>	228	1212

TMRCA estimates differ from those in table 3 of the text due to fewer STRs, different cluster definitions, and different mutation rates. \* oASD: observed Average Square Distance (average square difference between a sample of chromosomes and the MRCA)

**Table 2 Suppl. Material: Descent clusters and estimated ages. Comparative data: BRITAIN**

Cluster	Surname	Men in cluster	oASD*	MRCA	95% CIs		TMRCA	95% CIs	
				T in gens.	Lower	Upper	31 y/gen	Lower	Upper
1	Attenborough	26	0.015	<b>5.84</b>	1.96	13.47	<b>181</b>	61	417
2	Beckham	16	0.138	<b>52.18</b>	31.84	83.90	<b>1617</b>	987	2601
3	Butterfield	14	0.05	<b>18.97</b>	7.70	37.49	<b>588</b>	239	1162
4	Butterfield	17	0.065	<b>24.55</b>	12.48	44.55	<b>761</b>	387	1381
5	Clare	41	0.054	<b>20.36</b>	12.94	30.67	<b>631</b>	401	951
6	Clare	10	0.03	<b>11.38</b>	2.68	29.21	<b>353</b>	83	906
7	Clare	6	0.033	<b>12.65</b>	2.60	41.89	<b>392</b>	81	1299
8	Clare	5	0.05	<b>18.97</b>	5.61	52.33	<b>588</b>	173	1622
9	Clare	15	0.027	<b>10.12</b>	2.59	24.72	<b>314</b>	80	766
10	Clare	26	0.069	<b>26.27</b>	15.57	41.36	<b>814</b>	483	1282
11	Clemo	16	0.069	<b>26.09</b>	12.86	45.89	<b>809</b>	399	1423
12	Dalgleish	5	0.02	<b>7.59</b>	1.10	34.70	<b>235</b>	34	1076
13	Dalgleish	22	0.055	<b>20.70</b>	10.86	36.30	<b>642</b>	337	1125
14	Feakes	5	0.02	<b>7.59</b>	1.21	36.20	<b>235</b>	37	1122
15	Feakes	7	0.014	<b>5.42</b>	0.89	23.45	<b>168</b>	28	727
16	Grewcock	20	0.015	<b>5.69</b>	1.69	15.19	<b>176</b>	52	471
17	Grewcock	7	0.043	<b>16.26</b>	4.01	43.78	<b>504</b>	124	1357
18	Haythornthwaite	32	0.013	<b>4.74</b>	1.53	11.48	<b>147</b>	48	356
19	Herrick	17	0.018	<b>6.70</b>	1.50	17.29	<b>208</b>	47	536
20	Jefferson	6	0.017	<b>6.32</b>	1.20	27.16	<b>196</b>	37	842
21	Jefferson	14	0.121	<b>46.08</b>	26.55	76.42	<b>1428</b>	823	2369
22	Jefferson	7	0.014	<b>5.42</b>	0.92	25.03	<b>168</b>	28	776
23	Jefferson	8	0.038	<b>14.23</b>	3.52	37.84	<b>441</b>	109	1173
24	Jeffreys	9	0.022	<b>8.43</b>	1.97	28.76	<b>261</b>	61	892
25	Jeffreys	5	0.02	<b>7.59</b>	1.42	32.29	<b>235</b>	44	1001
26	Jeffreys	14	0.143	<b>54.21</b>	31.53	86.62	<b>1680</b>	977	2685

Cluster	Surname	Men in cluster	oASD*	MRCA	95% CIs		TMRCA	95% CIs	
				T in gens.	Lower	Upper	31 y/gen	Lower	Upper
27	Jobling	15	0.007	<b>2.53</b>	0.43	10.97	<b>78</b>	13	340
28	Jobling	7	0.029	<b>10.84</b>	2.40	33.81	<b>336</b>	74	1048
29	Ketley	7	0.029	<b>10.84</b>	2.54	37.55	<b>336</b>	79	1164
30	Ketley	26	0.012	<b>4.38</b>	1.31	11.86	<b>136</b>	41	368
31	Lauder	8	0.063	<b>23.72</b>	8.82	54.18	<b>735</b>	273	1679
32	Northam	5	0.02	<b>7.59</b>	1.37	34.38	<b>235</b>	42	1066
33	Northam	27	0.104	<b>39.35</b>	25.31	57.35	<b>1220</b>	785	1778
34	Pitchford	9	0.056	<b>21.08</b>	7.35	47.34	<b>654</b>	228	1468
35	Pitchford	26	0.019	<b>7.30</b>	2.80	16.09	<b>226</b>	87	499
36	R.	7	0.043	<b>16.26</b>	4.30	47.07	<b>504</b>	133	1459
37	Ravenscroft	14	0.029	<b>10.84</b>	3.78	26.76	<b>336</b>	117	829
38	Ravenscroft	21	0.095	<b>36.14</b>	21.33	56.18	<b>1120</b>	661	1742
39	Secker	11	0.046	<b>17.25</b>	6.42	42.12	<b>535</b>	199	1306
40	Slingsby	11	0.055	<b>20.70</b>	8.80	42.92	<b>642</b>	273	1331
41	Slingsby	21	0.086	<b>32.53</b>	19.54	51.77	<b>1008</b>	606	1605
42	Slinn	14	0.079	<b>29.82</b>	15.51	52.66	<b>924</b>	481	1633
43	Slinn	6	0.017	<b>6.32</b>	1.08	27.29	<b>196</b>	33	846
44	Starbuck	16	0.044	<b>16.60</b>	7.34	32.99	<b>515</b>	227	1023
45	Stead	6	0.033	<b>12.65</b>	2.81	41.50	<b>392</b>	87	1287
46	Stead	13	0.031	<b>11.68</b>	3.95	28.19	<b>362</b>	122	874
47	Stead	6	0.05	<b>18.97</b>	5.62	52.30	<b>588</b>	174	1621
48	Stead	8	0.064	<b>24.27</b>	11.23	47.85	<b>752</b>	348	1483
49	Stribling	21	0.138	<b>52.40</b>	34.24	76.45	<b>1624</b>	1061	2370
50	Swindlehurst	41	0.055	<b>20.87</b>	13.35	31.28	<b>647</b>	414	970
51	Titchmarsh	14	0.036	<b>13.55</b>	4.92	30.25	<b>420</b>	153	938
52	Titmus	12	0.008	<b>3.16</b>	0.59	15.60	<b>98</b>	18	484
53	Wadsworth	14	0.021	<b>8.13</b>	2.55	21.59	<b>252</b>	79	669
54	Werrett	19	0.021	<b>7.99</b>	2.79	19.39	<b>248</b>	87	601
55	Werrett	31	0.073	<b>27.60</b>	17.53	41.50	<b>856</b>	543	1287
56	Widdowson	7	0.014	<b>5.42</b>	0.92	25.74	<b>168</b>	28	798
57	Widdowson	14	0.013	<b>4.65</b>	1.10	17.36	<b>144</b>	34.5	538
58	Winstone	12	0.008	<b>3.16</b>	0.60	13.67	<b>98</b>	18	424
59	Winstone	10	0.18	<b>68.30</b>	38.97	115.43	<b>2117</b>	1208	3578
60	Wordsworth	13	0.039	<b>14.60</b>	5.18	31.69	<b>452</b>	161	982
<b>Avg.</b>				<b>17.60</b>	8.09	37.85	<b>545</b>	254	1173

TMRCA estimates may differ from those previously published in British samples due to fewer STRs, different cluster definitions, and different mutation rates. \* oASD: observed Average Square Distance (average square difference between a sample of chromosomes and the MRCA)

**Table 3 Suppl. Material: Descent clusters and estimated ages. Comparative data: IRELAND**

Cluster	Surname	Men in cluster	oASD*	MRCA	95% CIs		TMRCA	95% CIs	
				T in gens.	Lower	Upper	31 y/gen	Lower	Upper
1	Bradley	7	0.014	<b>5.42</b>	0.96	25.61	<b>168</b>	30	794
2	Bradley	11	0.064	<b>24.15</b>	10.13	50.30	<b>749</b>	314	1559
3	Byrne	22	0.05	<b>18.97</b>	9.76	33.70	<b>588</b>	303	1045
4	Byrne	9	0.067	<b>25.30</b>	9.64	52.92	<b>784</b>	299	1641
5	Donohoe	14	0.064	<b>24.39</b>	12.34	45.40	<b>756</b>	382	1408
6	Donohoe	22	0.091	<b>34.50</b>	20.97	54.99	<b>1069</b>	650	1705
7	Donohoe	14	0.05	<b>18.97</b>	7.78	38.51	<b>588</b>	241	1194
8	Egan	14	0.136	<b>51.50</b>	29.91	81.67	<b>1596</b>	927	2532
9	Haughey	10	0.05	<b>18.97</b>	6.99	42.32	<b>588</b>	217	1312
10	Heaney	5	0.02	<b>7.59</b>	1.29	36.00	<b>235</b>	40	1116
11	Kelly	10	0.06	<b>22.77</b>	9.07	48.13	<b>706</b>	281	1492
12	Kelly	19	0.105	<b>39.94</b>	24.09	62.94	<b>1238</b>	747	1951
13	Kennedy	28	0.046	<b>17.62</b>	9.62	29.96	<b>546</b>	298	929
14	Kennedy	7	0.086	<b>32.53</b>	12.90	74.98	<b>1008</b>	400	2324
15	McCarthy	21	0.048	<b>18.07</b>	9.15	32.47	<b>560</b>	284	1007
16	McCarthy	24	0.129	<b>49.01</b>	32.77	71.33	<b>1519</b>	1016	2211
17	McEvoy	20	0.09	<b>34.15</b>	20.71	55.33	<b>1059</b>	642	1715
18	McEvoy	18	0.072	<b>27.41</b>	14.87	47.54	<b>850</b>	461	1474
19	McGilycuddy	20	0.07	<b>26.56</b>	15.09	45.01	<b>823</b>	468	1395
20	McGinley	13	0.062	<b>23.35</b>	10.71	47.09	<b>724</b>	332	1460
21	McGinn	14	0.114	<b>43.37</b>	24.45	70.91	<b>1344</b>	758	2198
22	McGuinness	28	0.061	<b>23.04</b>	13.50	36.38	<b>714</b>	419	1128
23	McGuinness	6	0.017	<b>6.32</b>	1.04	31.78	<b>196</b>	32	985
24	McGuinness	5	0.02	<b>7.59</b>	1.47	36.01	<b>235</b>	46	1116
25	McGuinness	23	0.083	<b>31.35</b>	18.71	49.84	<b>972</b>	580	1545
26	McGuinness	13	0.154	<b>58.38</b>	35.20	94.17	<b>1810</b>	1091	2919
27	Murphy	28	0.111	<b>42.01</b>	27.86	60.16	<b>1302</b>	864	1865
28	Murphy	6	0.033	<b>12.65</b>	2.55	40.62	<b>392</b>	79	1259
29	O'Gara	5	0.02	<b>7.59</b>	1.37	35.37	<b>235</b>	43	1096
30	O'Gara	14	0.079	<b>29.82</b>	15.68	53.24	<b>924</b>	486	1650
31	O'Hare	10	0.06	<b>22.77</b>	9.09	49.14	<b>706</b>	282	1523
32	O'Neill	41	0.095	<b>36.10</b>	25.47	50.41	<b>1119</b>	790	1563
33	O'Sullian	43	0.061	<b>22.94</b>	15.81	33.95	<b>711</b>	490	1052
34	Rooney	18	0.117	<b>44.27</b>	26.35	69.83	<b>1372</b>	817	2165
35	Ryan	35	0.034	<b>13.01</b>	7.16	21.94	<b>403</b>	222	680
36	Ryan	10	0.11	<b>41.23</b>	24.37	66.45	<b>1278</b>	756	2060
<b>Avg.</b>				<b>26.76</b>	14.41	49.34	<b>829</b>	447	1529

TMRCA estimates may differ from those previously published in Irish samples due to fewer STRs, different cluster definitions, and different mutation rates. \* oASD: observed Average Square Distance (average square difference between a sample of chromosomes and the MRCA)