**Appendix 17 Data for Quadrat/site Group Classification Lyons et al (2004)** A2 in the Lyons report has been changed to A1 here after the map provided on p 7 of this report. A- Avon Wheatbelt , M - Mallee, GS - Geraldton Sandplain , Y – Yalgoo, C – Coolgardie, ES – Esperance plains. IBRA sub-regions (From Environment Australia, 2000 in Lyons et al 2004)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Group** | **Number of quadrats** | **Mean and SD**  **% gypsum** | **Site description** | **Characteristic species** | **Mean ELCODE** | **Location** | **Comments** |
| **Woodlands and shrubs of lunettes, inter-wetlands flats and rises – predominantly inland saline systems** | | | | | | |  |
| 1.6 | 7 | 21.86  37.33 | *Darwinia* sp. Karonie shrublands  Dunes of inland saline pans and playas | *Alyxia buxifolia,*  *Darwinia* sp. karonie | 3.4 | Inland  4A1  2M2  1GS3 | 2 out of 7 quadrats very high EC and gypsum content.Small heterogeneous groupof quadrats |
| 1.8 | 39 | 3.59  13.68 | Elevated chenopod shrublands on high EC sites. Eastern side of saline playas that have accumulated evaporates from lake bed. | 38% taxa/quadrat introduced  *Atriplex vesicaria,*  *A paludosa,*  *Podolepis tepperi,*  *Pogonolepis muelleriana,*  *Eucalyptus kondininensis* (small no) | 3.1 | 1A2  15A1  22M2  1C | 9 quadrats out of 39 contained gypsum  % gypsum mean and SD low |
| **Chenopod dominated berms, beaches, and gypsum flats of natural and degraded primary saline wetland** | | | | | | |  |
| 3 | 11 | 53.64  47.85  Range 11-97% | Low dunes, heaves and berms with high EC and pH.  1 disjunct quadrat in M2 on large lunette with high pH – no gypsum and fine textured soils | *Chondropyxis halophila,*  *Rhodanthe heteranthera,*  *Asteridea athrixioides,*  *Atriplex halocarpa.*  Northern quadrats on raised beds  92-97% gypsum-  *Halosarcia* sp. Lake Moore (*Tecticornia loriae*),  *Chondropyxis halophila,*  *Frankenia conferta,*  *Triglochin lyonsii ms* | 2.7 | 9A1  1M2  1Y | 9 quadrats out of 11 contained gypsum. Northern - species poor *Tecticornia* shrubs Characteristic species commonlyoccur on non gypsum soils |
| 5 | 7 | 6.16  10.52 | Species poor beaches of degraded saline wetlands high EC and low pH dominated by *Melaleuca* shrublands. Margins of degraded saline lakes at low elevations subject to inundation. | *Melaleuca thyoides,*  *M. halmaturorum,*  *Tecticornia lylei* | 2.1 | 6A1  1M2 | Only 7 quadrats. % gypsum mean and SD low |
| 6 | 4 | 54.25  42.76 | Gypseous berms of southern playas, high mean EC and presence of gypsum. | Species poor –  *Tecticornia moniliformis,*  *Austrostipa juncifolia,*  *Triglochin nanum,*  *Maireana oppositifolia*  *Callitris glaucophylla* shrubland on low non-gypseous sands within Lake King –  *Tecticornia moniliformis,*  *Austrostipa juncifolia*, | 2.5 | 2M1  2M2 | Small group species poor quadrats and shared *Tecticornia moniliformis*  Characteristic species commomly occur on non gypsum soils*.* |
| 7 | 10 | 52.7  45.17 | Gypsum flats subject to inundation. High EC and high mean substrate pH. | Species poor *Tecticornia halocnemoides* | 1.9 | 6A1, 2M1, 2M2 | Small group. 7 quadrats out of 10 contained gypsum. Species poor and *Tecticornia halocnemoides* commonly occurs on non gypsum soils |
| **Species rich strands, berms and low sandy ridges of naturally saline and degraded sub-saline/saline wetlands** | | | | | | |  |
| 8.1 | 60 | 7.15  20.71 | Sandy and gypseous beaches, berms and low flats of saline pans and playas. High mean EC and pH relative to group 8.2. Weeds – degraded areas  , | \**Parapholis incurva,*  *\*Sonchus oleraceus,*  *Triglochin mucronata,*  *Atriplex holocarpa,*  *Cotula cotuloides,*  High INDVAL scores –  *Tecticornia peltata,*  *Gunniopsis septifraga*  *Triglochin mucronata,*  Gypseous beaches, berms in N study area –  *Fitzwillia axilliflora,*  *Neosciadium glochidiatum*  *Frankenia conferta* | 2.2 | 1A2  38A1  9M2  5GS2  7GS3 | Variable amount of gypsum (0-99%) with % gypsum mean and SD low |
| 8.2 | 33 | 1.86  9.44 | Sandy berms and low rises of saline pans and playas. Similar elevation to 8.1 show lower mean substrate EC, pH and clay content to 8.1. Double species richness to 8.1 | *Centrolepis humillima,*  *Angianthus micropodioides,*  *Centrolepis eremica,*  *Gnephosis tridens,*  *Atriplex hymenotheca.*  *Subset – Sarcocornia globosa,*  *Roycea pycnophylloides,*  *Tecticornia sp. Central wheatbelt,*  *Frankenia bracteata* | 2.4 | 22A1  8M2  2C  1Y | % gypsum mean and SD low. Threatened by increased flooding associated with drylandsalinity |
| 9.2 | 28 | 19.93  34.41 | Gypseous beaches, berms of southern playas and pans and coastal salt lakes. High pH and EC mostly contain gypsum. Quadrats occur at margins (mean ELCODE 2.4) | *Hydrocotyle medicaginoides, Brachyscome exilis,*  *Tecticornia syncarpa,*  *Isotoma scapigera,*  *Tecticornia uniflora,*  *Austrostipa juncifolia,*  *Goodenia salina,*  *Frankenia tetrapetala,*  *Haegiela tatei,*  *Vellea exigua* | 2.4 | Southern and coastal  1A1  1A2  3M1  14M2  5GS3  2 ES1  2ES2 | 19 quadrats out of 28 occur in the study area – coastal areas not included in this project. *Goodenia salina*  Possible gypsophile. |