CONTACT

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Veneklaas, E.J. & Poot, P. (2003) Seasonal patterns in water use and leaf turnover of different plant functional types in a species-rich woodland, south-western Australia. *Plant & Soil* **257**, 295-304.

TRAITS

SLA, leaf N, Amax, Gs, water content, Rdmass

MEAN and MAX given for LMA, Amass, Aarea, Gs, Ci/Ca; mean used for LMA, max used for others (v. little diff between av and max for Amass or Aarea; Gs depressed somewhat in mean cf max, though r2 0.76). Max Ci refers to the Ci on the day when max Aarea was recorded.

Rdarea estimated from Rdmass and SLA.

***\****leaf life spans based on one year leaf demography, except for five species which are winter ephemerals (life span estimated) : Anigozanthos, Drosera, Gladiolus, Pterostylis, Stylidium.

***\****where mean and maxima were given, these refer to mean and maximum for six 2-monthly measurements

***\****gas exchange measurement were carried out on exposed leaves of mature plants, in morning hours before midday depression

The Gladiolus spp is not native, but all the others are.

**SITE**

Melaleuca Park Conservation Reserve, a coastal sandplain 40 km N of Perth, Western Australia.

Vegetation: Banksia woodland

Soil: very deep, highly leached coarse sands

Climate: Mediterranean, annual rainfall c. 750 mm, long dry hot summer

CLIMATE

Estimated from 009067    UPPER SWAN RESEARCH STATION             Commenced: 1957    Last record: 1998   Latitude:-31.7564 S    Longitude: 116.0222 E    Elevation:   15.0 m

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mo | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | Av/ANN |
| MaxT | 32.9 | 34.6 | 30.9 | 25.2 | 22.2 | 18.5 | 18.1 | 18.8 | 20.8 | 23.6 | 27.1 | 30.6 | 23.7 |
| MinT | 15.6 | 16.7 | 15.3 | 12.6 | 9.5 | 8.7 | 7.7 | 7.1 | 7.9 | 8.4 | 11 | 13.1 | 9.5 |
| **Av\_T** | **24.3** | **25.7** | **23.1** | **18.9** | **15.9** | **13.6** | **12.9** | **13** | **14.4** | **16** | **19.1** | **21.9** | **18.2** |
| 9am\_T | 26.2 | 24.7 | 22.8 | 18.8 | 15.7 | 13.1 | 12.3 | 12.9 | 15.1 | 18.1 | 20.5 | 23.7 | 17.1 |
| 9am\_RH | 48 | 52 | 55 | 70 | 74 | 81 | 81 | 79 | 72 | 61 | 59 | 49 | 68 |
| 3pm\_T | 30.5 | ? | 28.9 | 23.2 | 20.5 | 17.5 | 16.8 | 17.2 | 18.5 | 21.3 | 25.1 | 29.2 | 20.8 |
| 3pm\_RH | 34 | ? | 39 | 47 | 55 | 69 | 64 | 60 | 61 | 52 | 44 | ? | 54 |
| **ppt** | **10.9** | **16.3** | **15.6** | **39.5** | **97.3** | **151.7** | **155.9** | **107** | **68.9** | **42.4** | **22.6** | **11.6** | **740** |
| av\_daily\_evap\_mm | 9.9 | 9.1 | 7.3 | 5 | 3.1 | 2.5 | 2.3 | 2.6 | 3.3 | 4.8 | 6.7 | 8.5 | 5.3 |

**Soil properties**

                                                               0-5 cm depth   20-30 cm depth

organic carbon               %                    0.8                    0.3

pH-H2O                                                 5.2                    5.2

pH-CaCl2                                               4.5                    4.4

EC                                  dS m-1            0.03                  0.01

total N                            mg g-1            0.2

total P                             mg kg-1          0.02

exch Ca                          meq (100 g)-1 1.4                    0.9

exch Mg                         meq (100 g)-1 0.2                    0.1

exch K                            meq (100 g)-1 0.04                  0.02

**Need**

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       C3/c4; only N fixer are Fabaceae