

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

S.Rivas-Martinez(+) & S.Rivas-Saenz

(Adapted to Synoptical Table 14/02/2020)

WAVE HILL (AUSTRALIA)

Altitude: 213 m.

Latitude: 17°30'S Longitude: 130°57'E

Temperature observation period.: 1970-1994 (25)

Rainfall observation period....: 1970-1994 (25)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | Epi |
|--------|-------|-------|-------|-------|-------|-------|--------|
| Jan. | 30.84 | 37.78 | 23.89 | 44.44 | 16.67 | 99.1 | 192.37 |
| Feb. | 30.84 | 37.78 | 23.89 | 44.44 | 13.89 | 111.8 | 168.53 |
| Mar. | 29.17 | 35.56 | 22.78 | 42.78 | 13.89 | 76.2 | 164.71 |
| Apr. | 26.11 | 33.89 | 18.33 | 41.11 | 10.00 | 7.6 | 121.18 |
| May. | 23.06 | 30.56 | 15.56 | 38.33 | 5.56 | 5.1 | 75.03 |
| Jun. | 20.28 | 27.78 | 12.78 | 36.11 | 3.33 | 2.5 | 43.34 |
| Jul. | 19.45 | 27.78 | 11.11 | 35.56 | 3.33 | 5.1 | 38.49 |
| Aug. | 22.23 | 30.56 | 13.89 | 37.22 | 3.89 | 0.8 | 67.14 |
| Sep. | 25.83 | 34.44 | 17.22 | 40.56 | 7.22 | 2.5 | 119.84 |
| Oct. | 29.73 | 37.78 | 21.67 | 43.89 | 12.78 | 17.8 | 175.87 |
| Nov. | 31.39 | 38.89 | 23.89 | 45.56 | 13.33 | 45.7 | 188.61 |
| Dec. | 31.67 | 38.89 | 24.44 | 45.00 | 16.67 | 83.8 | 201.64 |
| Year | 26.72 | 34.31 | 19.12 | 41.25 | 10.05 | 458 | 1556.8 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|---|------|
| Thermicity index.....(It): | 656 |
| Compensated thermicity index.....(Itc): | 656 |
| Simple continentality index.....(Ic): | 12.2 |
| Diurnality index.....(Id): | 17.2 |
| Annual ombrothermic index.....(Io): | 1.43 |
| Monthly dry ombrothermic index.....(Iod1): | 0.04 |
| Bimonthly dry ombrothermic index.....(Iod2): | 0.14 |
| Threemonthly dry ombrothermic index.....(Iod3): | 0.14 |
| Fourmonthly dry ombrothermic index.....(Iod4): | 0.16 |
| Annual ombro-evaporation index.....(Ioe): | 0.29 |
| Annual positive temperature.....(Tp): | 3206 |
| Annual negative temperature.....(Tn): | 0 |
| Dry station temperature.....(Td): | 620 |
| Positive precipitation.....(Pp): | 458 |

| N. of Months | P>4T | P:2T-4T | PT-2T | P<T | T<0 |
|--------------|------|---------|-------|-----|-----|
| | 0 | 4 | 1 | 7 | 0 |

Latitudinal Belt...: Eutropical

Continentalty.....: Oceanic - Low Semihyperoceanic

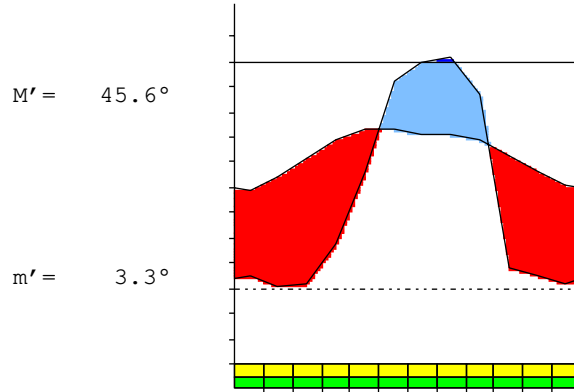
Bioclimate(Variant): TROPICAL XERIC (SEMIARID)

Bioclimatic Belt...: LOW THERMOTROPICAL LOW SEMIARID

WAVE HILL (AUSTRALIA)

213 m

P= 458 17° 30'S 130° 57'E 25/25 y.
 T= 26.7 ° Ic= 12.2 Tp= 3206 Tn= 0
 m= 11.1 ° M= 27.8 ° Itc= 656 Io= 1.4



TROPICAL XERIC (SEMIARID)
 LOW THERMOTROPICAL LOW SEMIARID

WATER INDEX CARD WAVE HILL (AUSTRALIA)
 Altitude: 213 m. Latitude: 17° 30'S

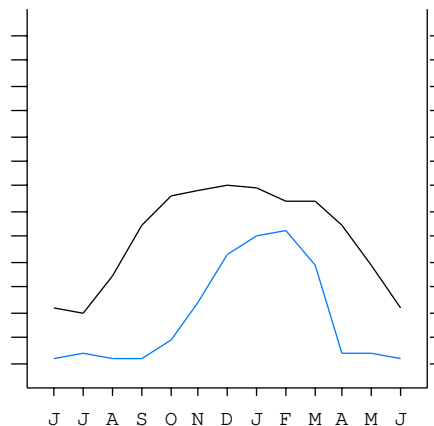
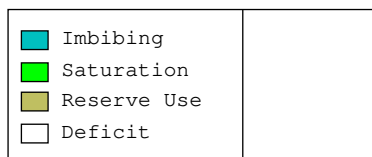
| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|------|------|-----|----|---|-----|------|----|----|------|
| Jul. | 19.5 | 38 | 5 | 0 | 0 | 5 | 33 | 0 | 0 | -0.8 |
| Aug. | 22.2 | 67 | 1 | 0 | 0 | 1 | 66 | 0 | 0 | -0.9 |
| Sep. | 25.8 | 120 | 3 | 0 | 0 | 3 | 117 | 0 | 0 | -0.9 |
| Oct. | 29.7 | 176 | 18 | 0 | 0 | 18 | 158 | 0 | 0 | -0.8 |
| Nov. | 31.4 | 189 | 46 | 0 | 0 | 46 | 143 | 0 | 0 | -0.7 |
| Dec. | 31.7 | 202 | 84 | 0 | 0 | 84 | 118 | 0 | 0 | -0.5 |
| Jan. | 30.8 | 192 | 99 | 0 | 0 | 99 | 93 | 0 | 0 | -0.4 |
| Feb. | 30.8 | 169 | 112 | 0 | 0 | 112 | 57 | 0 | 0 | -0.3 |
| Mar. | 29.2 | 165 | 76 | 0 | 0 | 76 | 89 | 0 | 0 | -0.5 |
| Apr. | 26.1 | 121 | 8 | 0 | 0 | 8 | 114 | 0 | 0 | -0.9 |
| May. | 23.1 | 75 | 5 | 0 | 0 | 5 | 70 | 0 | 0 | -0.9 |
| Jun. | 20.3 | 43 | 3 | 0 | 0 | 3 | 41 | 0 | 0 | -0.9 |
| Year | 26.7 | 1557 | 458 | * | * | 458 | 1099 | 0 | 0 | * |

R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

WAVE HILL (AUSTRALIA)

17°30'S 130°57'E 213 m 25/25 y.

T= 26.7 Ic= 12.2 TROPICAL XERIC (SEMIARID)
 m= 11.1 Tp= 3206 LOW THERMOTROPICAL
 M= 27.8 Tn= 0 LOW SEMIARID
 M' = 45.6 Itc= 656
 m' = 3.3 Io= 1.4
 P= 458 mm
 PE= 1557 mm



All over the year,
 there is hydic deficit

WAVE HILL (AUSTRALIA)

Latitude: 17°30'S Longitude: 130°57'E Altitude: 213 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [B1b]
 + Type: B. Oceanic
 + Subtype: 1. Semihyperoceanic
 + Variant: b. Low
 Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A3.2b.4b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .: SEMIARID
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic ClassificationTrxe(Sdr).Ttr.Sar.Seo

WAVE HILL (AUSTRALIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 434
 Coldest semester of the year.....(Psw): 24
 Warmest four months period of the year.....(Pcm1): 340
 Following warmest four months period.....(Pcm2): 91
 Positive precipitation dryest 3 months.....(Ppd): 8
 Positive precipitation dryest 2 months.....(Ppd2): 3
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 229
 Positive precipitation warmest 2 months.....(Pps2): 130
 Positive precipitation warmest 1 month.....(Pps1): 84
 Positive precipitation coldest 3 months.....(Ppw): 8
 Positive precipitation coldest 2 months.....(Ppw2): 8
 Positive precipitation coldest 1 month.....(Ppw1): 5

| Seasons | Jun+Jul+Aug Ttr3-3 | Sep+Oct+Nov Ttr4-4 | Dec+Jan+Feb Ttr1-1 | Mar+Apr+May Ttr2-2 |
|----------|-----------------------|-----------------------|-----------------------|-----------------------|
| Rainfall | 8 | 66 | 294 | 88 |

Tropical rainfall rhythms: 1 > 2 > 4 > 3

WAVE HILL (AUSTRALIA)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.7
 Average coldest month [T].....(Tmin): 19.5
 Maximum temp. warmest month [M].....(Tmmax): 38.9
 Minimum temp. coldest month [m].....(Tmmin): 11.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 45.6
 Absolute Min.temp. coldest month [m'].....(Tamin): 3.3
 First warmest contrasted month [M].....(Tcmax): 34.4 (9)
 First coldest contrasted month [m].....(Tcmin): 17.2 (9)
 Dry station temperature.....(Td): 620
 Positive temperature dryest 3 months.....(Tpd): 620
 Positive temperature dryest 2 months.....(Tpd2): 481
 Positive temperature dryest 1 month.....(Tpd1): 222
 Positive temperature warmest 3 months.....(Tps): 939
 Positive temperature warmest 2 months.....(Tps2): 631
 Positive temperature warmest 1 month.....(Tps1): 317
 Positive temperature coldest 3 months.....(Tpw): 620
 Positive temperature coldest 2 months.....(Tpw2): 397
 Positive temperature coldest 1 month.....(Tpw1): 195

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SEASONAL PARAMETERS

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Warmest semester...(Sms) | o | o | o | | | | | | | o | o | o |
| Dryest semester....(Smd) | | | | o | o | o | o | o | o | | | |
| Warmest 4 months...(Cm1) | o | o | | | | | | | | | o | o |
| Dryest 4 months....(Cmd) | | | | | | o | o | o | o | | | |
| Vegetation Activity(Pav) | o | o | o | o | o | o | o | o | o | o | o | o |
| Ultragelid...[M'<=0] (Pf) | | | | | | | | | | | | |
| Hypergelid...[M <=0] (Pf) | | | | | | | | | | | | |
| Gelid.....[T <=0] (Pf) | | | | | | | | | | | | |
| Subgelid.....[m <=0] (Pf) | | | | | | | | | | | | |
| Pregelid.....[m'<=0] (Pf) | | | | | | | | | | | | |
| Agelid.....[m'> 0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |
| HiperAgelid..[all>0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |

WAVE HILL (AUSTRALIA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 3.40
 Mediterranean index of January.....(Im1): No
 Mediterranean index of January & February.....(Im2): No
 Mediterranean index of December to February...(Im3): No

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|-------------|------|------|---------------|------|------|-------------|------|------|
| Pp(x10) | 838 | 991 | 1118 | 762 | 76 | 51 | 25 | 51 | 8 | 25 | 178 | 457 |
| Tp | 317 | 308 | 308 | 292 | 261 | 231 | 203 | 195 | 222 | 258 | 297 | 314 |
| Io (Iom) | 2.65 | 3.21 | 3.63 | 2.61 | 0.29 | 0.22 | 0.12 | 0.26 | 0.04 | 0.10 | 0.60 | 1.46 |
| Seasons | Dec+Jan+Feb | | | Mar+Apr+May | | | Jun+Jul+Aug | | | Sep+Oct+Nov | | |
| Pp(x10)/Tp | 2947 / 934 | | | 889 / 783 | | | 84 / 620 | | | 660 / 869 | | |
| Io (Iot) | 3.157 | | | 1.135 | | | 0.136 | | | 0.759 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 3836 / 1717 | | | | | | 744 / 1489 | | | | | |
| Io (Iosm) | 2.234 | | | | | | 0.500 | | | | | |

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4580/3206=1.43 There is No Yearly Aridity

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|--------------------------|-------------|------|------|-------------|------|--------------------------|-------------|------|------|-------------|------|------|
| Pp [P*10] | 838 | 991 | 1118 | 762 | 76 | 51 | 25 | 51 | 8 | 25 | 178 | 457 |
| Tp [T*10] | 317 | 308 | 308 | 292 | 261 | 231 | 203 | 195 | 222 | 258 | 297 | 314 |
| Iom [Pp/Tp] | 265 | 321 | 363 | 261 | 29 | 22 | 12 | 26 | 4 | 10 | 60 | 146 |
| Avm [200-Iom] | *** | *** | *** | *** | 171 | 178 | 188 | 174 | 196 | 190 | 140 | 54 |
| Seasons | Dec+Jan+Feb | | | Mar+Apr+May | | | Jun+Jul+Aug | | | Sep+Oct+Nov | | |
| Pp / Tp | 2947 / 934 | | | 889 / 783 | | | 84 / 620 | | | 660 / 869 | | |
| Iot [Pp/Tp] | 316 | | | 113 | | | 14 | | | 76 | | |
| Avs E[Avm<200] | *** | | | *** | | | 558 | | | 385 | | |
| Lower ultrahyperarid [2] | | | | | | Upper ultrahyperarid [2] | | | | | | |
| Lower hyperarid [3] | | | | | | Weak lower arid [1] | | | | | | |
| Strong upper arid [1] | | | | | | Weak lower semiarid [1] | | | | | | |

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BIOCLIMATIC INDICES I

| | |
|--|-------------|
| CI of Supan (1884) [Tmax-Tmin] | (Sp): 12.22 |
| CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] | 48.68 |
| CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] | 30.99 |
| + Oceanic (20<CI<40) | |
| CI of Currey (1974) [CI=Sp/(1+Lat/3)] | 1.79 |
| + Continental (1.7<CI<2.3) | |
| Rainfall Index of Lang (1925) [R=P/T] | 17.14 |
| + Steppic (40>R>0) | |
| Aridity Index of Martonne (1926) [Ia=P/(T+10)] | 12.47 |
| + Arid -steppic- (15>Ia>5) | |
| I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)] | 32.97 |
| + Semiarid (50>Q>30) | |
| I of Dantin & Revenga (1940) [DR=100*T/P] | 5.83 |
| + Arid (6>DR>3) | |
| Aridity Index of UNEP [I=P/PE] | 0.29 |
| + Semiarid (0.5>Im>0.2) | |
| Potencial Erosion I of Fournier (1960) [K=Pi ² /P]..... | 27.29 |
| + Very low (K<60) | |

WAVE HILL (AUSTRALIA)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate A. Warm and temperate warm
 + Region 3. Termoxeroteric (Mediterranean warm)
 + Thermic type: 1. Megathermic

| Thornthwaite (1948) | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|--------------------------------------|------|-------|-------|-------|-------|-------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 0.32 | 0.37 | 0.25 | 0.02 | 0.01 | 0.01 | 0.02 | 0.00 | 0.01 | 0.05 | 0.13 | 0.26 |
| T-E ratio | 13.88 | 13.88 | 13.13 | 11.75 | 10.38 | 9.13 | 8.75 | 10.00 | 11.62 | 13.38 | 14.13 | 14.25 |
| Precipitation-effectiveness: 14.50 | | | | | | Temperature-efficiency: 144.27 | | | | | | |
| Moisture Index [MI=100*(P-PE)/PE]: -70.58 | | | | | | | | | | | | |
| + E.Dry (-110<MI<-66.7) | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE]: 70.58 | | | | | | | | | | | | |
| + Strong deficit (33.3<DI) | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE]: 0.00 | | | | | | | | | | | | |
| + No surplus (0<HI<10) | | | | | | | | | | | | |
| Potential Evapotranspiration PE: 1556.77 | | | | | | | | | | | | |
| + Megathermic (PE>1440) | | | | | | | | | | | | |

