

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

PERTH (AUSTRALIA)

Altitude: 60 m.

Latitude: 37°57'S Longitude: 115°51'E

Temperature observation period.: 1930-1980 (51)

Rainfall observation period....: 1950-1980 (31)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | EPI |
|--------|-------|-------|-------|-------|------|-------|--------|
| Jan. | 23.40 | 29.40 | 17.20 | 43.70 | 9.20 | 7.0 | 133.17 |
| Feb. | 23.90 | 29.40 | 17.20 | 44.60 | 8.70 | 12.0 | 117.51 |
| Mar. | 22.20 | 27.20 | 16.10 | 41.30 | 7.70 | 22.0 | 103.25 |
| Apr. | 19.20 | 24.40 | 13.90 | 37.60 | 4.10 | 52.0 | 68.30 |
| May. | 16.10 | 20.60 | 11.70 | 32.40 | 1.30 | 125.0 | 45.88 |
| Jun. | 13.70 | 17.80 | 10.00 | 27.60 | 1.60 | 192.0 | 31.14 |
| Jul. | 13.10 | 17.20 | 8.90 | 24.70 | 1.20 | 183.0 | 30.42 |
| Aug. | 13.50 | 17.80 | 8.90 | 27.80 | 1.90 | 135.0 | 35.21 |
| Sep. | 14.70 | 19.40 | 10.00 | 32.70 | 2.60 | 69.0 | 44.44 |
| Oct. | 16.30 | 21.10 | 11.70 | 37.20 | 4.40 | 54.0 | 61.53 |
| Nov. | 19.20 | 24.40 | 13.90 | 40.30 | 5.60 | 23.0 | 87.39 |
| Dec. | 21.50 | 27.20 | 16.10 | 42.20 | 8.60 | 15.0 | 116.29 |
| Year | 18.07 | 22.99 | 12.97 | 36.01 | 4.74 | 889 | 874.53 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|---|------|
| Thermicity index.....(It): | 442 |
| Compensated thermicity index.....(Itc): | 442 |
| Simple continentality index.....(Ic): | 10.8 |
| Diurnality index.....(Id): | 12.2 |
| Annual ombrothermic index.....(Io): | 4.10 |
| Monthly estival ombrothermic index.....(Ios1): | 0.30 |
| Bimonthly estival ombrothermic index.....(Ios2): | 0.40 |
| Threemonthly estival ombrothermic index.....(Ios3): | 0.49 |
| Fourmonthly estival ombrothermic index.....(Ios4): | 0.65 |
| Annual ombro-evaporation index.....(Ioe): | 1.02 |
| Annual positive temperature.....(Tp): | 2168 |
| Annual negative temperature.....(Tn): | 0 |
| Estival temperature.....(Ts): | 688 |
| Positive precipitation.....(Pp): | 889 |

| N. of Months | P>4T | P:2T-4T | PT-2T | P<T | T<0 |
|--------------|------|---------|-------|-----|-----|
| | 5 | 2 | 1 | 4 | 0 |

Latitudinal Belt...: Low Eutemperate

Continentality.....: Hyperoceanic - Low Subhyperoceanic

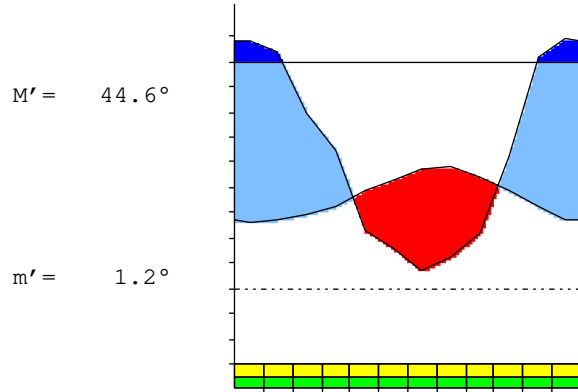
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW THERMOMEDITERRANEAN LOW SUBHUMID

PERTH (AUSTRALIA)

60 m

P= 889 37° 57' S 115° 51' E 51/31 y.
 T= 18.1 ° Ic= 10.8 Tp= 2168 Tn= 0
 m= 8.9 ° M= 17.2 ° Itc= 442 Io= 4.1



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW THERMOMEDITERRANEAN LOW SUBHUMID

WATER INDEX CARD PERTH (AUSTRALIA)
 Altitude: 60 m. Latitude: 37° 57' S

| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Jul. | 13.1 | 30 | 183 | 0 | 100 | 30 | 0 | 153 | 111 | 5.0 |
| Aug. | 13.5 | 35 | 135 | 0 | 100 | 35 | 0 | 100 | 106 | 2.8 |
| Sep. | 14.7 | 44 | 69 | 0 | 100 | 44 | 0 | 25 | 65 | 0.5 |
| Oct. | 16.3 | 62 | 54 | -8 | 92 | 62 | 0 | 0 | 33 | -0.1 |
| Nov. | 19.2 | 87 | 23 | -64 | 28 | 87 | 0 | 0 | 16 | -0.7 |
| Dec. | 21.5 | 116 | 15 | -28 | 0 | 43 | 73 | 0 | 8 | -0.8 |
| Jan. | 23.4 | 133 | 7 | 0 | 0 | 7 | 126 | 0 | 4 | -0.9 |
| Feb. | 23.9 | 118 | 12 | 0 | 0 | 12 | 106 | 0 | 2 | -0.8 |
| Mar. | 22.2 | 103 | 22 | 0 | 0 | 22 | 81 | 0 | 1 | -0.7 |
| Apr. | 19.2 | 68 | 52 | 0 | 0 | 52 | 16 | 0 | 1 | -0.2 |
| May. | 16.1 | 46 | 125 | 79 | 79 | 46 | 0 | 0 | 0 | 1.7 |
| Jun. | 13.7 | 31 | 192 | 21 | 100 | 31 | 0 | 140 | 70 | 5.1 |
| Year | 18.1 | 875 | 889 | * | * | 472 | 402 | 417 | 417 | * |

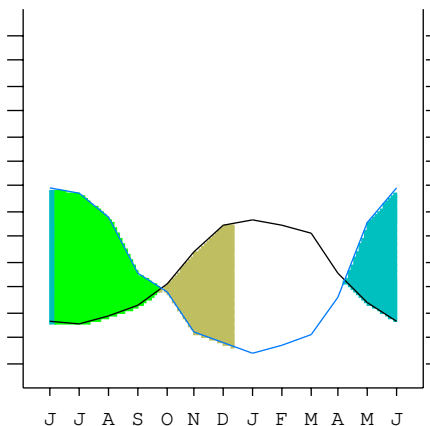
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

PERTH (AUSTRALIA)

37°57'S 115°51'E 60 m 51/31 y.

T= 18.1 Ic= 10.8 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 8.9 Tp= 2168 LOW THERMOMEDITERRANEAN
 M= 17.2 Tn= 0 LOW SUBHUMID
 M' = 44.6 Itc= 442
 m' = 1.2 Io= 4.1
 P= 889 mm ———
 PE= 875 mm ———

| | |
|-------------|---------|
| Imbibing | 6 Apr. |
| Saturation | 4 Jun. |
| Reserve Use | 23 Sep. |
| Deficit | 9 Dec. |



PERTH (AUSTRALIA)

Latitude: 37°57'S Longitude: 115°51'E Altitude: 60 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3b]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: b. Low
 Thermic types [B1.A3]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low Eutemperate
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm
 Bioclimatic types [B8.2b.6b]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant .:
 + Thermic type.....: 2. THERMOMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic ClassificationMepo.Tme.Shu.Sho

PERTH (AUSTRALIA)

Latitude: 37°57'S Longitude: 115°51'E Altitude: 60 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 131
 Coldest semester of the year.....(Psw): 758
 Warmest four months period of the year.....(Pcm1): 56
 Following warmest four months period.....(Pcm2): 552
 Positive precipitation dryest 3 months.....(Ppd): 34
 Positive precipitation dryest 2 months.....(Ppd2): 19
 Positive precipitation dryest 1 month.....(Ppd1): 7
 Positive precipitation warmest 3 months.....(Pps): 41
 Positive precipitation warmest 2 months.....(Pps2): 19
 Positive precipitation warmest 1 month.....(Pps1): 12
 Positive precipitation coldest 3 months.....(Ppw): 510
 Positive precipitation coldest 2 months.....(Ppw2): 318
 Positive precipitation coldest 1 month.....(Ppw1): 183

| Seasons | Winter Tr1-W | Spring Tr2-P | Summer Tr3-S | Automn Tr4-F |
|----------|-----------------|-----------------|-----------------|-----------------|
| Rainfall | 510 | 146 | 34 | 199 |

Seasonal rainfall rhythms: W > F > P > S

PERTH (AUSTRALIA)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 23.9
 Average coldest month [T].....(Tmin): 13.1
 Maximum temp. warmest month [M].....(Tmax): 29.4
 Minimum temp. coldest month [m].....(Tmin): 8.9
 Absolute Max.temp. warmest month [M'].....(Tamax): 44.6
 Absolute Min.temp. coldest month [m'].....(Tamin): 1.2
 First warmest contrasted month [M].....(Tcmax): 29.4 (1)
 First coldest contrasted month [m].....(Tcmin): 17.2 (1)
 Estival temperature.....(Ts): 688
 Positive temperature dryest 3 months.....(Tpd): 688
 Positive temperature dryest 2 months.....(Tpd2): 473
 Positive temperature dryest 1 month.....(Tpd1): 234
 Positive temperature warmest 3 months.....(Tps): 695
 Positive temperature warmest 2 months.....(Tps2): 473
 Positive temperature warmest 1 month.....(Tps1): 239
 Positive temperature coldest 3 months.....(Tpw): 403
 Positive temperature coldest 2 months.....(Tpw2): 266
 Positive temperature coldest 1 month.....(Tpw1): 131

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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 |

PERTH (AUSTRALIA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.98
 Mediterranean index of January.....(Im1): 19.02
 Mediterranean index of January & February.....(Im2): 13.19
 Mediterranean index of December to February...(Im3): 10.79

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|------------|------|------|---------------|------|------|------------|------|------|
| Pp(x10) | 150 | 70 | 120 | 220 | 520 | 1250 | 1920 | 1830 | 1350 | 690 | 540 | 230 |
| Tp | 215 | 234 | 239 | 222 | 192 | 161 | 137 | 131 | 135 | 147 | 163 | 192 |
| Io (Iom) | 0.70 | 0.30 | 0.50 | 0.99 | 2.71 | 7.76 | 14.0 | 14.0 | 10.0 | 4.69 | 3.31 | 1.20 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp(x10)/Tp | 340 / 688 | | | 1990 / 575 | | | 5100 / 403 | | | 1460 / 502 | | |
| Io (Iot) | 0.494 | | | 3.461 | | | 12.66 | | | 2.908 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 2330 / 1263 | | | | | | 6560 / 905 | | | | | |
| Io (Iosm) | 1.845 | | | | | | 7.249 | | | | | |

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 8890/2168=4.10 **There is No Yearly Aridity**

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|---------------------------|-----------|------|------|------------|------|------|-----------------------|------|------|------------|------|------|
| Pp [P*10] | 150 | 70 | 120 | 220 | 520 | 1250 | 1920 | 1830 | 1350 | 690 | 540 | 230 |
| Tp [T*10] | 215 | 234 | 239 | 222 | 192 | 161 | 137 | 131 | 135 | 147 | 163 | 192 |
| Iom [Pp/Tp] | 70 | 30 | 50 | 99 | 271 | 776 | \$\$ | \$\$ | \$\$ | 469 | 331 | 120 |
| Avm [200-Iom] | 130 | 170 | 150 | 101 | *** | *** | *** | *** | *** | *** | *** | 80 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp / Tp | 340 / 688 | | | 1990 / 575 | | | 5100 / 403 | | | 1460 / 502 | | |
| Iot [Pp/Tp] | 49 | | | 346 | | | 1266 | | | 291 | | |
| Avs E[Avm<200] | 450 | | | *** | | | *** | | | *** | | |
| Lower hyperarid [1] | | | | | | | Strong lower arid [1] | | | | | |
| Weak lower arid [2] | | | | | | | Weak upper arid [1] | | | | | |
| Strong lower semiarid [1] | | | | | | | | | | | | |

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 10.80
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 9.45
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 10.73
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.79
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 49.21
 + Semiarid (60>R>40)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 31.67
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]: 113.23
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 2.03
 + Semiarid (3>DR>2)
 Aridity Index of UNEP [I=P/PE]: 1.02
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 41.47
 + Very low (K<60)

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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: 3. Macro-mesothermic

| Thornthwaite (1948) | | | | | | | | | | | | |
|---|-------|-------|------|------|------|-------------------------------------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 0.02 | 0.04 | 0.07 | 0.21 | 0.59 | 1.02 | 0.99 | 0.70 | 0.32 | 0.23 | 0.08 | 0.05 |
| T-E ratio | 10.53 | 10.75 | 9.99 | 8.64 | 7.25 | 6.16 | 5.90 | 6.07 | 6.61 | 7.33 | 8.64 | 9.67 |
| Precipitation-effectiveness: 43.19 | | | | | | Temperature-efficiency: 97.56 | | | | | | |
| Moisture Index [MI=100*(P-PE)/PE]: 1.65 + C2.Subhumid humid (0<MI<20) | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE]: 46.01 + Strong deficit (33.3<DI) | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE]: 47.67 + Strong surplus (20<HI) | | | | | | | | | | | | |
| Potential Evapotranspiration PE: 874.53 + Third mesothermic (855<PE<997) | | | | | | | | | | | | |

