

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

MILDURA AIRPORT (AUSTRALIA)

Altitude: 51 m.

Latitude: 34°14'S Longitude: 142°5'E

Temperature observation period.: 1961-1993 (33)

Rainfall observation period....: 1946-1990 (45)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | EPi |
|--------|-------|-------|-------|------|------|------|--------|
| Jan. | 24.04 | 32.17 | 15.93 | 0.00 | 0.00 | 19.7 | 138.37 |
| Feb. | 24.02 | 26.98 | 21.13 | 0.00 | 0.00 | 20.4 | 118.91 |
| Mar. | 21.16 | 27.00 | 15.30 | 0.00 | 0.00 | 21.6 | 96.06 |
| Apr. | 16.84 | 21.73 | 11.98 | 0.00 | 0.00 | 21.3 | 57.02 |
| May. | 13.22 | 16.18 | 10.33 | 0.00 | 0.00 | 29.4 | 35.68 |
| Jun. | 10.50 | 11.98 | 8.73 | 0.00 | 0.00 | 22.9 | 21.95 |
| Jul. | 9.88 | 13.05 | 6.55 | 0.00 | 0.00 | 26.7 | 20.91 |
| Aug. | 11.17 | 14.53 | 7.38 | 0.00 | 0.00 | 28.5 | 28.01 |
| Sep. | 13.67 | 18.86 | 8.79 | 0.00 | 0.00 | 26.8 | 42.04 |
| Oct. | 16.88 | 21.86 | 11.79 | 0.00 | 0.00 | 31.2 | 68.84 |
| Nov. | 19.76 | 24.96 | 14.89 | 0.00 | 0.00 | 24.7 | 93.21 |
| Dec. | 22.38 | 29.14 | 15.81 | 0.00 | 0.00 | 20.3 | 124.01 |
| Year | 16.96 | 21.54 | 12.38 | 0.00 | 0.00 | 293 | 845.01 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|---|------|
| Thermicity index.....(It): | 366 |
| Compensated thermicity index.....(Itc): | 366 |
| Simple continentality index.....(Ic): | 14.2 |
| Diurnality index.....(Id): | 16.2 |
| Annual ombrothermic index.....(Io): | 1.44 |
| Monthly estival ombrothermic index.....(Ios1): | 0.82 |
| Bimonthly estival ombrothermic index.....(Ios2): | 0.83 |
| Threemonthly estival ombrothermic index.....(Ios3): | 0.86 |
| Fourmonthly estival ombrothermic index.....(Ios4): | 0.94 |
| Annual ombro-evaporation index.....(Ioe): | 0.89 |
| Annual positive temperature.....(Tp): | 2035 |
| Annual negative temperature.....(Tn): | 0 |
| Estival temperature.....(Ts): | 704 |
| Positive precipitation.....(Pp): | 293 |

| N. of | P>4T | P:2T-4T | PT-2T | P<T | T<0 |
|--------|------|---------|-------|-----|-----|
| Months | 0 | 4 | 5 | 3 | 0 |

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - High Euoceanic

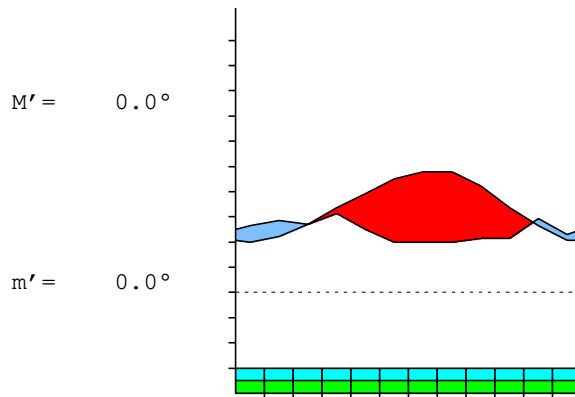
Bioclimate.....: MEDITERRANEAN XERIC-OCEANIC

Bioclimatic Belt...: UPPER THERMOMEDITERRANEAN LOW SEMIARID

MILDURA AIRPORT (AUSTRALIA)

51 m

P= 293 34° 14'S 142° 5'E 33/45 y.
 T= 17.0° Ic= 14.2 Tp= 2035 Tn= 0
 m= 6.6° M= 13.1° Itc= 366 Io= 1.4



MEDITERRANEAN XERIC-OCEANIC
 UPPER THERMOMEDITERRANEAN LOW SEMIARID

WATER INDEX CARD MILDURA AIRPORT (AUSTRALIA)
 Altitude: 51 m. Latitude: 34° 14'S

| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|------|-----|-----|----|---|-----|-----|----|----|------|
| Jul. | 9.9 | 21 | 27 | 6 | 7 | 21 | 0 | 0 | 0 | 0.2 |
| Aug. | 11.2 | 28 | 28 | 0 | 7 | 28 | 0 | 0 | 0 | 0.0 |
| Sep. | 13.7 | 42 | 27 | -7 | 0 | 34 | 8 | 0 | 0 | -0.3 |
| Oct. | 16.9 | 69 | 31 | 0 | 0 | 31 | 38 | 0 | 0 | -0.5 |
| Nov. | 19.8 | 93 | 25 | 0 | 0 | 25 | 69 | 0 | 0 | -0.7 |
| Dec. | 22.4 | 124 | 20 | 0 | 0 | 20 | 104 | 0 | 0 | -0.8 |
| Jan. | 24.0 | 138 | 20 | 0 | 0 | 20 | 119 | 0 | 0 | -0.8 |
| Feb. | 24.0 | 119 | 20 | 0 | 0 | 20 | 99 | 0 | 0 | -0.8 |
| Mar. | 21.2 | 96 | 22 | 0 | 0 | 22 | 74 | 0 | 0 | -0.7 |
| Apr. | 16.8 | 57 | 21 | 0 | 0 | 21 | 36 | 0 | 0 | -0.6 |
| May. | 13.2 | 36 | 29 | 0 | 0 | 29 | 6 | 0 | 0 | -0.1 |
| Jun. | 10.5 | 22 | 23 | 1 | 1 | 22 | 0 | 0 | 0 | 0.0 |
| Year | 17.0 | 845 | 293 | * | * | 293 | 552 | 0 | 0 | * |

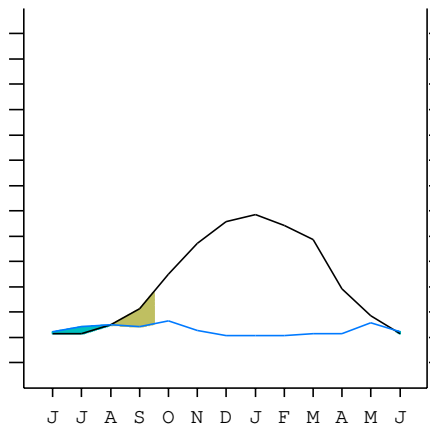
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

MILDURA AIRPORT (AUSTRALIA)

34°14'S 142°5'E 51 m 33/45 y.

T= 17.0 Ic= 14.2 MEDITERRANEAN XERIC-OCEANIC
 m= 6.6 Tp= 2035 UPPER THERMOMEDITERRANEAN
 M= 13.1 Tn= 0 LOW SEMIARID
 M' = 0.0 Itc= 366
 m' = 0.0 Io= 1.4
 P= 293 mm ———
 PE= 845 mm ———

| | |
|-------------|---------|
| Imbibing | 27 May. |
| Saturation | 1 Aug. |
| Reserve Use | 15 Sep. |
| Deficit | |



MILDURA AIRPORT (AUSTRALIA)

Latitude: 34°14'S Longitude: 142°5'E Altitude: 51 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2a]
 + Type: B. Oceanic
 + Subtype: 2. Euoceanic
 + Variant: a. High
 Thermic types [A3.A3]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm
 Bioclimatic types [B6.2a.4b]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 6. XERIC-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOMEDITERRANEAN
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: MepDC.Tme.Sar

MILDURA AIRPORT (AUSTRALIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 138
 Coldest semester of the year.....(Psw): 156
 Warmest four months period of the year.....(Pcm1): 82
 Following warmest four months period.....(Pcm2): 100
 Positive precipitation dryest 3 months.....(Ppd): 60
 Positive precipitation dryest 2 months.....(Ppd2): 40
 Positive precipitation dryest 1 month.....(Ppd1): 20
 Positive precipitation warmest 3 months.....(Pps): 60
 Positive precipitation warmest 2 months.....(Pps2): 40
 Positive precipitation warmest 1 month.....(Pps1): 20
 Positive precipitation coldest 3 months.....(Ppw): 78
 Positive precipitation coldest 2 months.....(Ppw2): 50
 Positive precipitation coldest 1 month.....(Ppw1): 27

| Seasons | Winter Tr1-W | Spring Tr2-P | Summer Tr3-S | Automn Tr4-F |
|----------|-----------------|-----------------|-----------------|-----------------|
| Rainfall | 78 | 82 | 60 | 72 |

Seasonal rainfall rhythms: P > W > F > S

MILDURA AIRPORT (AUSTRALIA)

Latitude: 34°14'S Longitude: 142°5'E Altitude: 51 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 24.0
 Average coldest month [T].....(Tmin): 9.9
 Maximum temp. warmest month [M].....(Tmmax): 32.2
 Minimum temp. coldest month [m].....(Tmmin): 6.6
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
 First warmest contrasted month [M].....(Tcmax): 32.2 (1)
 First coldest contrasted month [m].....(Tcmin): 15.9 (1)
 Estival temperature.....(Ts): 704
 Positive temperature dryest 3 months.....(Tpd): 704
 Positive temperature dryest 2 months.....(Tpd2): 464
 Positive temperature dryest 1 month.....(Tpd1): 240
 Positive temperature warmest 3 months.....(Tps): 704
 Positive temperature warmest 2 months.....(Tps2): 481
 Positive temperature warmest 1 month.....(Tps1): 240
 Positive temperature coldest 3 months.....(Tpw): 316
 Positive temperature coldest 2 months.....(Tpw2): 204
 Positive temperature coldest 1 month.....(Tpw1): 99

MILDURA AIRPORT (AUSTRALIA)

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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) | | | | | | | | | | | | |
| HiperAgelid..[all>0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |

MILDURA AIRPORT (AUSTRALIA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 2.88
 Mediterranean index of January.....(Im1): 7.04
 Mediterranean index of January & February.....(Im2): 6.43
 Mediterranean index of December to February...(Im3): 6.33

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|-----------|------|------|---------------|------|------|-----------|------|------|
| Pp(x10) | 203 | 197 | 204 | 216 | 213 | 294 | 229 | 267 | 285 | 268 | 312 | 247 |
| Tp | 224 | 240 | 240 | 212 | 168 | 132 | 105 | 99 | 112 | 137 | 169 | 198 |
| Io (Iom) | 0.91 | 0.82 | 0.85 | 1.02 | 1.27 | 2.22 | 2.18 | 2.70 | 2.55 | 1.96 | 1.85 | 1.25 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp(x10)/Tp | 603 / 704 | | | 723 / 512 | | | 780 / 316 | | | 827 / 503 | | |
| Io (Iot) | 0.856 | | | 1.412 | | | 2.473 | | | 1.645 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 1326 / 1217 | | | | | | 1608 / 819 | | | | | |
| Io (Iosm) | 1.090 | | | | | | 1.964 | | | | | |

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 2934/2035=1.44 **There is No Yearly Aridity**

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|-------------------------|-----------|------|------|-----------|------|---------------------------|-----------|------|------|-----------|------|------|
| Pp [P*10] | 203 | 197 | 204 | 216 | 213 | 294 | 229 | 267 | 285 | 268 | 312 | 247 |
| Tp [T*10] | 224 | 240 | 240 | 212 | 168 | 132 | 105 | 99 | 112 | 137 | 169 | 198 |
| Iom [Pp/Tp] | 91 | 82 | 85 | 102 | 127 | 222 | 218 | 270 | 255 | 196 | 185 | 125 |
| Avm [200-Iom] | 109 | 118 | 115 | 98 | 73 | *** | *** | *** | *** | 4 | 15 | 75 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp / Tp | 603 / 704 | | | 723 / 512 | | | 780 / 316 | | | 827 / 503 | | |
| Iot [Pp/Tp] | 86 | | | 141 | | | 247 | | | 164 | | |
| Avs E[Avm<200] | 343 | | | *** | | | *** | | | 94 | | |
| Weak upper arid [4] | | | | | | Strong lower semiarid [1] | | | | | | |
| Weak lower semiarid [2] | | | | | | Strong upper semiarid [1] | | | | | | |
| Weak upper semiarid [2] | | | | | | | | | | | | |

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BIOCLIMATIC INDICES I

| | | |
|--|-------|-------|
| CI of Supan (1884) [Tmax-Tmin] | (Sp): | 14.16 |
| CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] | | 22.39 |
| CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] | | 20.51 |
| + Oceanic (20<CI<40) | | |
| CI of Currey (1974) [CI=Sp/(1+Lat/3)] | | 1.14 |
| + Subcontinental (1.1<CI<1.7) | | |
| Rainfall Index of Lang (1925) [R=P/T] | | 17.30 |
| + Steppic (40>R>0) | | |
| Aridity Index of Martonne (1926) [Ia=P/(T+10)] | | 10.88 |
| + Arid -steppic- (15>Ia>5) | | |
| I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)] | | 29.58 |
| + Arid (30>Q>0) | | |
| I of Dantin & Revenga (1940) [DR=100*T/P] | | 5.78 |
| + Arid (6>DR>3) | | |
| Aridity Index of UNEP [I=P/PE] | | 0.35 |
| + Semiarid (0.5>Im>0.2) | | |
| Potential Erosion I of Fournier (1960) [K=Pi ² /P] | | 3.33 |
| + Very low (K<60) | | |

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 3. Macro-mesothermic

| Thornthwaite (1948) | | | | | | | | | | | | |
|---|-------|-------|------|------|------|------------------------------|------|------|------|------|------|--------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 0.06 | 0.06 | 0.07 | 0.08 | 0.13 | 0.11 | 0.13 | 0.13 | 0.12 | 0.12 | 0.09 | 0.07 |
| T-E ratio | 10.82 | 10.81 | 9.52 | 7.58 | 5.95 | 4.72 | 4.45 | 5.03 | 6.15 | 7.60 | 8.89 | 10.07 |
| Precipitation-effectiveness: 11.73 | | | | | | Temperature-efficiency | | | | | | 91.58 |
| Moisture Index [MI=100*(P-PE)/PE] | | | | | | | | | | | | -65.28 |
| + D.Semiarid (-66.7<MI<-33.3) | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE] | | | | | | | | | | | | 65.28 |
| + Strong deficit (33.3<DI) | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE] | | | | | | | | | | | | 0.00 |
| + No surplus (0<HI<10) | | | | | | | | | | | | |
| Potential Evapotranspiration PE | | | | | | | | | | | | 845.01 |
| + Second mesothermic (712<PE<855) | | | | | | | | | | | | |

