

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

NHILL (AUSTRALIA)

Altitude: 135 m.

Latitude: 36°19'S Longitude: 141°39'E

Temperature observation period.: 1980-1994 (15)

Rainfall observation period....: 1947-1994 (48)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | Epi |
|--------|-------|-------|-------|------|------|------|--------|
| Jan. | 21.11 | 29.44 | 12.78 | 0.00 | 0.00 | 16.8 | 118.68 |
| Feb. | 21.67 | 30.00 | 13.33 | 0.00 | 0.00 | 19.6 | 104.55 |
| Mar. | 18.34 | 26.11 | 10.56 | 0.00 | 0.00 | 21.6 | 82.06 |
| Apr. | 13.62 | 21.67 | 5.56 | 0.00 | 0.00 | 28.7 | 46.45 |
| May. | 11.67 | 17.22 | 6.11 | 0.00 | 0.00 | 42.2 | 34.84 |
| Jun. | 9.17 | 13.89 | 4.44 | 0.00 | 0.00 | 52.6 | 22.04 |
| Jul. | 8.61 | 13.89 | 3.33 | 0.00 | 0.00 | 43.4 | 21.53 |
| Aug. | 9.73 | 15.56 | 3.89 | 0.00 | 0.00 | 45.7 | 27.97 |
| Sep. | 11.67 | 18.33 | 5.00 | 0.00 | 0.00 | 46.2 | 39.14 |
| Oct. | 14.45 | 21.67 | 7.22 | 0.00 | 0.00 | 39.9 | 61.60 |
| Nov. | 17.50 | 25.56 | 9.44 | 0.00 | 0.00 | 28.4 | 84.39 |
| Dec. | 20.27 | 28.33 | 12.22 | 0.00 | 0.00 | 24.6 | 112.53 |
| Year | 14.82 | 21.81 | 7.82 | 0.00 | 0.00 | 410 | 755.78 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|---|------|
| Thermicity index.....(It): | 320 |
| Compensated thermicity index.....(Itc): | 320 |
| Simple continentality index.....(Ic): | 13.1 |
| Diurnality index.....(Id): | 16.7 |
| Annual ombrothermic index.....(Io): | 2.30 |
| Monthly estival ombrothermic index.....(Ios1): | 0.80 |
| Bimonthly estival ombrothermic index.....(Ios2): | 0.85 |
| Threemonthly estival ombrothermic index.....(Ios3): | 0.97 |
| Fourmonthly estival ombrothermic index.....(Ios4): | 1.11 |
| Annual ombro-evaporation index.....(Ioe): | 0.58 |
| Annual positive temperature.....(Tp): | 1778 |
| Annual negative temperature.....(Tn): | 0 |
| Estival temperature.....(Ts): | 631 |
| Positive precipitation.....(Pp): | 410 |

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

Latitudinal Belt...: Low eutemperate

Continentalty.....: Oceanic - Low Semihyperoceanic

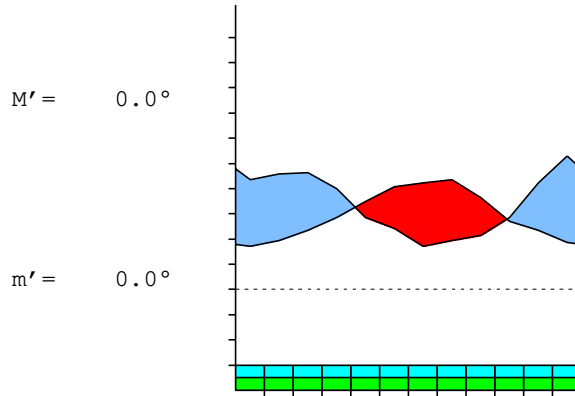
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW MESOMEDITERRANEAN LOW DRY

NHILL (AUSTRALIA)

135 m

P= 410 36° 19' S 141° 39' E 15/48 y.
 T= 14.8° Ic= 13.1 Tp= 1778 Tn= 0
 m= 3.3° M= 13.9° Itc= 320 Io= 2.3



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW MESOMEDITERRANEAN LOW DRY

WATER INDEX CARD

NHILL (AUSTRALIA)

Altitude: 135 m.

Latitude: 36° 19' S

| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|------|-----|-----|-----|----|-----|-----|----|----|------|
| Jul. | 8.6 | 22 | 43 | 22 | 60 | 22 | 0 | 0 | 0 | 1.0 |
| Aug. | 9.7 | 28 | 46 | 18 | 78 | 28 | 0 | 0 | 0 | 0.6 |
| Sep. | 11.7 | 39 | 46 | 7 | 85 | 39 | 0 | 0 | 0 | 0.1 |
| Oct. | 14.4 | 62 | 40 | -22 | 63 | 62 | 0 | 0 | 0 | -0.3 |
| Nov. | 17.5 | 84 | 28 | -56 | 7 | 84 | 0 | 0 | 0 | -0.6 |
| Dec. | 20.3 | 113 | 25 | -7 | 0 | 31 | 81 | 0 | 0 | -0.7 |
| Jan. | 21.1 | 119 | 17 | 0 | 0 | 17 | 102 | 0 | 0 | -0.8 |
| Feb. | 21.7 | 105 | 20 | 0 | 0 | 20 | 85 | 0 | 0 | -0.8 |
| Mar. | 18.3 | 82 | 22 | 0 | 0 | 22 | 60 | 0 | 0 | -0.7 |
| Apr. | 13.6 | 46 | 29 | 0 | 0 | 29 | 18 | 0 | 0 | -0.3 |
| May. | 11.7 | 35 | 42 | 7 | 7 | 35 | 0 | 0 | 0 | 0.2 |
| Jun. | 9.2 | 22 | 53 | 31 | 38 | 22 | 0 | 0 | 0 | 1.3 |
| Year | 14.8 | 756 | 410 | * | * | 410 | 346 | 0 | 0 | * |

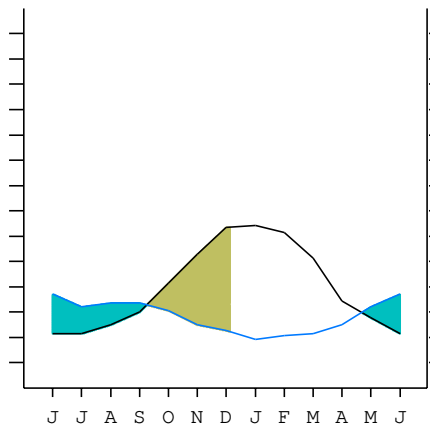
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

NHILL (AUSTRALIA)

36°19' S 141°39' E 135 m 15/48 y.

T= 14.8 Ic= 13.1 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 3.3 Tp= 1778 LOW MESOMEDITERRANEAN
 M= 13.9 Tn= 0 LOW DRY
 M' = 0.0 Itc= 320
 m' = 0.0 Io= 2.3
 P= 410 mm
 PE= 756 mm

| | |
|-------------|---------|
| Imbibing | 22 Apr. |
| Saturation | 8 Sep. |
| Reserve Use | 3 Dec. |
| Deficit | |



NHILL (AUSTRALIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]
 + Type: B. Oceanic
 + Subtype: 1. Semihyperoceanic
 + Variant: b. Low
 Thermic types [B1.B4]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate
 Bioclimatic types [B8.3b.5b]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 3. MESOMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Mehc.Mme.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 151
 Coldest semester of the year.....(Psw): 259
 Warmest four months period of the year.....(Pcm1): 83
 Following warmest four months period.....(Pcm2): 167
 Positive precipitation dryest 3 months.....(Ppd): 58
 Positive precipitation dryest 2 months.....(Ppd2): 36
 Positive precipitation dryest 1 month.....(Ppd1): 17
 Positive precipitation warmest 3 months.....(Pps): 61
 Positive precipitation warmest 2 months.....(Pps2): 36
 Positive precipitation warmest 1 month.....(Pps1): 20
 Positive precipitation coldest 3 months.....(Ppw): 142
 Positive precipitation coldest 2 months.....(Ppw2): 96
 Positive precipitation coldest 1 month.....(Ppw1): 43

| Seasons | Winter Tr1-W | Spring Tr2-P | Summer Tr3-S | Automn Tr4-F |
|----------|-----------------|-----------------|-----------------|-----------------|
| Rainfall | 141 | 114 | 61 | 92 |

Seasonal rainfall rhythms: W > P > F > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 21.7
 Average coldest month [T].....(Tmin): 8.6
 Maximum temp. warmest month [M].....(Tmmax): 30.0
 Minimum temp. coldest month [m].....(Tmmin): 3.3
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
 First warmest contrasted month [M].....(Tcmax): 30.0 (2)
 First coldest contrasted month [m].....(Tcmin): 13.3 (2)
 Estival temperature.....(Ts): 631
 Positive temperature dryest 3 months.....(Tpd): 611
 Positive temperature dryest 2 months.....(Tpd2): 428
 Positive temperature dryest 1 month.....(Tpd1): 211
 Positive temperature warmest 3 months.....(Tps): 631
 Positive temperature warmest 2 months.....(Tps2): 428
 Positive temperature warmest 1 month.....(Tps1): 217
 Positive temperature coldest 3 months.....(Tpw): 275
 Positive temperature coldest 2 months.....(Tpw2): 178
 Positive temperature coldest 1 month.....(Tpw1): 86

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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 |

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.84
 Mediterranean index of January.....(Im1): 7.06
 Mediterranean index of January & February.....(Im2): 6.13
 Mediterranean index of December to February...(Im3): 5.50

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|-----------|------|------|---------------|------|------|------------|------|------|
| Pp(x10) | 246 | 168 | 196 | 216 | 287 | 422 | 526 | 434 | 457 | 462 | 399 | 284 |
| Tp | 203 | 211 | 217 | 183 | 136 | 117 | 92 | 86 | 97 | 117 | 145 | 175 |
| Io (Iom) | 1.21 | 0.80 | 0.90 | 1.18 | 2.11 | 3.62 | 5.74 | 5.04 | 4.70 | 3.96 | 2.76 | 1.62 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp(x10)/Tp | 610 / 631 | | | 925 / 436 | | | 1417 / 275 | | | 1145 / 436 | | |
| Io (Iot) | 0.967 | | | 2.120 | | | 5.151 | | | 2.625 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 1535 / 1067 | | | | | | 2562 / 711 | | | | | |
| Io (Iosm) | 1.439 | | | | | | 3.602 | | | | | |

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4097/1778=2.30 **There is No Yearly Aridity**

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|---------------------------|-----------|------|------|-----------|------|-------------------------|------------|------|------|------------|------|------|
| Pp [P*10] | 246 | 168 | 196 | 216 | 287 | 422 | 526 | 434 | 457 | 462 | 399 | 284 |
| Tp [T*10] | 203 | 211 | 217 | 183 | 136 | 117 | 92 | 86 | 97 | 117 | 145 | 175 |
| Iom [Pp/Tp] | 121 | 80 | 90 | 118 | 211 | 362 | 574 | 504 | 470 | 396 | 276 | 162 |
| Avm [200-Iom] | 79 | 120 | 110 | 82 | *** | *** | *** | *** | *** | *** | *** | 38 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp / Tp | 610 / 631 | | | 925 / 436 | | | 1417 / 275 | | | 1145 / 436 | | |
| Iot [Pp/Tp] | 97 | | | 212 | | | 515 | | | 262 | | |
| Avs E[Avm<200] | 309 | | | *** | | | *** | | | *** | | |
| Strong upper arid [1] | | | | | | Weak upper arid [2] | | | | | | |
| Strong lower semiarid [1] | | | | | | Weak lower semiarid [1] | | | | | | |
| Strong upper semiarid [1] | | | | | | | | | | | | |

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BIOCLIMATIC INDICES I

| | | |
|--|-------|-------|
| CI of Supan (1884) [Tmax-Tmin] | (Sp): | 13.06 |
| CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] | | 17.09 |
| CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] | | 16.70 |
| + Hyperoceanic (-20<CI<20) | | |
| CI of Currey (1974) [CI=Sp/(1+Lat/3)] | | 1.00 |
| + Oceanic (0.6<CI<1.1) | | |
| Rainfall Index of Lang (1925) [R=P/T] | | 27.65 |
| + Steppic (40>R>0) | | |
| Aridity Index of Martonne (1926) [Ia=P/(T+10)] | | 16.51 |
| + Semiarid -mediterranean- (20>Ia>15) | | |
| I of Emberger (1930) [Q=100*P/(Tmmax ² -Tmmin ²)] | | 46.09 |
| + Semiarid (50>Q>30) | | |
| I of Dantin & Revenga (1940) [DR=100*T/P] | | 3.62 |
| + Arid (6>DR>3) | | |
| Aridity Index of UNEP [I=P/PE] | | 0.54 |
| + Subhumid - dry (0.65>I>0.5) | | |
| Potential Erosion I of Fournier (1960) [K=Pi ² /P] | | 6.75 |
| + Very low (K<60) | | |

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 4. Mesothermic

| Thornthwaite (1948) | | | | | | | | | | | | |
|---|------|------|------|------|------|------------------------------|------|------|------|------|------|--------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 0.06 | 0.07 | 0.08 | 0.12 | 0.20 | 0.28 | 0.23 | 0.24 | 0.22 | 0.17 | 0.11 | 0.09 |
| T-E ratio | 9.50 | 9.75 | 8.25 | 6.13 | 5.25 | 4.13 | 3.87 | 4.38 | 5.25 | 6.50 | 7.88 | 9.12 |
| Precipitation-effectiveness: 18.70 | | | | | | Temperature-efficiency | | | | | | 80.01 |
| Moisture Index [MI=100*(P-PE)/PE] | | | | | | | | | | | | -45.79 |
| + D.Semiarid (-66.7<MI<-33.3) | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE] | | | | | | | | | | | | 45.78 |
| + Strong deficit (33.3<DI) | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE] | | | | | | | | | | | | 0.00 |
| + No surplus (0<HI<10) | | | | | | | | | | | | |
| Potential Evapotranspiration PE | | | | | | | | | | | | 755.78 |
| + Second mesothermic (712<PE<855) | | | | | | | | | | | | |

