

Phytosociological Research Center

www.globalbioclimatics.org

Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

WYNYARD (AUSTRALIA)

Altitude: 18 m.

Latitude: 41°1'S Longitude: 145°43'E

Temperature observation period.: 1946-1994 (49)

Rainfall observation period....: 1964-1994 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	16.11	20.00	12.22	33.89	3.89	38.4	90.82
Feb.	16.67	20.56	12.78	29.44	3.89	42.9	79.94
Mar.	15.28	18.89	11.67	28.33	1.67	49.0	71.51
Apr.	13.34	16.67	10.00	24.44	2.78	78.0	52.23
May.	11.67	14.44	8.89	19.44	-0.56	94.5	40.22
Jun.	9.72	12.22	7.22	17.78	-0.56	120.4	28.83
Jul.	9.17	11.67	6.67	16.11	-0.56	125.2	28.84
Aug.	9.45	12.22	6.67	17.78	-2.22	121.9	33.23
Sep.	10.84	13.89	7.78	20.00	-2.22	105.2	43.06
Oct.	11.95	15.56	8.33	25.00	1.11	94.7	56.10
Nov.	13.33	17.22	9.44	26.11	2.22	66.8	67.89
Dec.	15.00	18.89	11.11	31.67	2.78	68.1	84.84
Year	12.71	16.02	9.40	24.17	1.02	1005	677.52

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	311
Compensated thermicity index.....(Itc):	306
Simple continentality index.....(Ic):	7.5
Diurnality index.....(Id):	7.8
Annual ombrothermic index.....(Io):	6.59
Monthly estival ombrothermic index.....(Ios1):	2.38
Bimonthly estival ombrothermic index.....(Ios2):	2.48
Threemonthly estival ombrothermic index.....(Ios3):	3.13
Fourmonthly estival ombrothermic index.....(Ios4):	3.54
Annual ombro-evaporation index.....(Ioe):	0.52
Annual positive temperature.....(Tp):	1525
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	478
Positive precipitation.....(Pp):	1005

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	9	3	0	0	0

Latitudinal Belt...: Low eutemperate

Continentality.....: Hyperoceanic - Low Euhyperoceanic

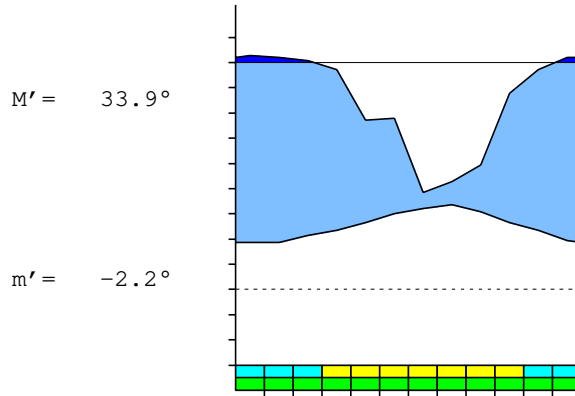
Bioclimate(Variant): TEMPERATE HYPEROCEANIC (SUBMEDITERRANEAN)

Bioclimatic Belt...: UPPER THERMOTEMPERATE LOW HUMID

WYNYARD (AUSTRALIA)

18 m

P= 1005 41° 1'S 145° 43'E 49/31 y.
 T= 12.7° Ic= 7.5 Tp= 1525 Tn= 0
 m= 6.7° M= 11.7° Itc= 306 Io= 6.6



TEMPERATE HYPEROCEANIC (SUBMEDITERRANEAN)
 UPPER THERMOTEMPERATE LOW HUMID

WATER INDEX CARD

WYNYARD (AUSTRALIA)

Altitude: 18 m.

Latitude: 41° 1'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	9.2	29	125	0	100	29	0	96	66	3.3
Aug.	9.4	33	122	0	100	33	0	89	77	2.6
Sep.	10.8	43	105	0	100	43	0	62	70	1.4
Oct.	11.9	56	95	0	100	56	0	39	54	0.6
Nov.	13.3	68	67	-1	99	68	0	0	27	0.0
Dec.	15.0	85	68	-17	82	85	0	0	14	-0.1
Jan.	16.1	91	38	-52	30	91	0	0	7	-0.5
Feb.	16.7	80	43	-30	0	73	7	0	3	-0.4
Mar.	15.3	72	49	0	0	49	23	0	2	-0.3
Apr.	13.3	52	78	26	26	52	0	0	1	0.4
May.	11.7	40	95	54	80	40	0	0	0	1.3
Jun.	9.7	29	120	20	100	29	0	72	36	3.1
Year	12.7	678	1005	*	*	648	30	357	357	*

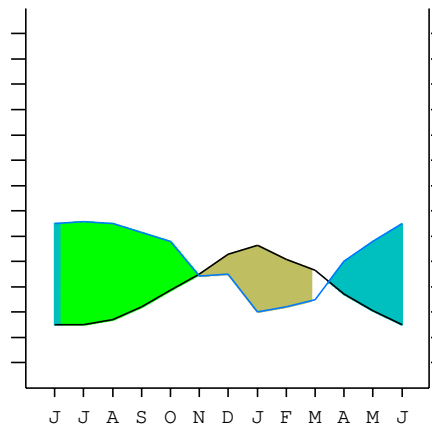
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

WYNYARD (AUSTRALIA)

41°1'S 145°43'E 18 m 49/31 y.

T= 12.7 Ic= 7.5 TEMPERATE HYPEROCEANIC (SUBMEDITERRANEAN)
 m= 6.7 Tp= 1525 UPPER THERMOTEMPERATE
 M= 11.7 Tn= 0 LOW HUMID
 M' = 33.9 Itc= 306
 m' = -2.2 Io= 6.6
 P= 1005 mm ———
 PE= 678 mm ———

Imbibing	14 Mar.
Saturation	7 Jun.
Reserve Use	30 Oct.
Deficit	25 Feb.



WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2b]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + 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 [C4b.2a.7b]
 + Macrobioclimate: C. TEMPERATE
 + Bioclimate: 4. HYPEROCEANIC
 + Bioclimatic variant .: b. SUBMEDITERRANEAN
 + Thermic type.....: 2. THERMOTEMPERATE
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Texe (Sbm).Tte.Hum

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 343
 Coldest semester of the year.....(Psw): 662
 Warmest four months period of the year.....(Pcm1): 198
 Following warmest four months period.....(Pcm2): 418
 Positive precipitation dryest 3 months.....(Ppd): 130
 Positive precipitation dryest 2 months.....(Ppd2): 81
 Positive precipitation dryest 1 month.....(Ppd1): 38
 Positive precipitation warmest 3 months.....(Pps): 130
 Positive precipitation warmest 2 months.....(Pps2): 81
 Positive precipitation warmest 1 month.....(Pps1): 43
 Positive precipitation coldest 3 months.....(Ppw): 368
 Positive precipitation coldest 2 months.....(Ppw2): 247
 Positive precipitation coldest 1 month.....(Ppw1): 125

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	367	266	149	221

Seasonal rainfall rhythms: W > P > F > S

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 16.7
 Average coldest month [T].....(Tmin): 9.2
 Maximum temp. warmest month [M].....(Tmmax): 20.6
 Minimum temp. coldest month [m].....(Tmmin): 6.7
 Absolute Max.temp. warmest month [M'].....(Tamax): 33.9
 Absolute Min.temp. coldest month [m'].....(Tamin): -2.2
 First warmest contrasted month [M].....(Tcmax): 20.0 (1)
 First coldest contrasted month [m].....(Tcmin): 12.2 (1)
 Estival temperature.....(Ts): 478
 Positive temperature dryest 3 months.....(Tpd): 481
 Positive temperature dryest 2 months.....(Tpd2): 328
 Positive temperature dryest 1 month.....(Tpd1): 161
 Positive temperature warmest 3 months.....(Tps): 481
 Positive temperature warmest 2 months.....(Tps2): 328
 Positive temperature warmest 1 month.....(Tps1): 167
 Positive temperature coldest 3 months.....(Tpw): 283
 Positive temperature coldest 2 months.....(Tpw2): 186
 Positive temperature coldest 1 month.....(Tpw1): 92

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

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)					o	o	o	o	o			
Agelid.....[m' > 0] (Pf)	o	o	o	o						o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o						o	o	o

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.67
 Mediterranean index of January.....(Im1): 2.37
 Mediterranean index of January & February.....(Im2): 2.10
 Mediterranean index of December to February...(Im3): 1.71

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	681	384	429	490	780	945	1204	1252	1219	1052	947	668
Tp	150	161	167	153	133	117	97	92	95	108	120	133
Io (Iom)	4.54	2.38	2.57	3.21	5.85	8.10	12.4	13.7	12.9	9.70	7.92	5.01
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	1494 / 478			2215 / 403			3675 / 283			2667 / 361		
Io (Iot)	3.127			5.498			12.97			7.384		
Semesters	December-May						June-November					
Pp(x10)/Tp	3709 / 881						6342 / 645					
Io (Iosm)	4.211						9.839					

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 10051/1525=6.59 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	681	384	429	490	780	945	1204	1252	1219	1052	947	668
Tp [T*10]	150	161	167	153	133	117	97	92	95	108	120	133
Iom [Pp/Tp]	454	238	257	321	585	810	\$\$	\$\$	\$\$	970	792	501
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	1494 / 478			2215 / 403			3675 / 283			2667 / 361		
Iot [Pp/Tp]	313			550			1297			738		
Avs E[Avm<200]	***			***			***			***		

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 7.50
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: -0.97
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 2.40
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.51
 + Hyperoceanic (0<CI<0.6)
 Rainfall Index of Lang (1925) [R=P/T]: 79.07
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 44.26
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 265.74
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.26
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.48
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 15.60
 + Very low (K<60)

WYNYARD (AUSTRALIA)

Latitude: 41°1'S Longitude: 145°43'E Altitude: 18 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 7. Mesoaxeric (Axic temperate)
 + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.16	0.18	0.21	0.38	0.50	0.69	0.74	0.71	0.57	0.49	0.32	0.31
T-E ratio	7.25	7.50	6.88	6.00	5.25	4.37	4.13	4.25	4.88	5.38	6.00	6.75
Precipitation-effectiveness:	52.62					Temperature-efficiency: 68.64						
Moisture Index [MI=100*(P-PE)/PE]: 48.35 + B2.Humid medium-humid (40<MI<60)												
Index of dryness [DI=100*d/PE]: 4.40 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 52.74 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 677.52 + First mesothermic (570<PE<712)												

