

# Phytosociological Research Center

www.globalbioclimatics.org

## Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

RAWLINNA (AUSTRALIA)

Altitude: 185 m.

Latitude: 31°0'S Longitude: 125°15'E

Temperature observation period.: 1973-1994 (22)

Rainfall observation period....: 1980-1994 (15)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	23.34	31.67	15.00	47.78	5.56	5.1	127.31
Feb.	23.89	32.78	15.00	46.11	5.00	15.2	114.15
Mar.	21.11	28.33	13.89	44.44	6.11	17.8	93.15
Apr.	18.89	26.11	11.67	40.00	3.33	10.2	67.78
May.	15.00	21.67	8.33	35.00	0.00	20.3	42.13
Jun.	11.94	18.33	5.56	27.78	-0.56	17.8	25.66
Jul.	10.84	17.78	3.89	28.33	-2.22	12.7	22.66
Aug.	12.22	20.00	4.44	33.89	-1.11	15.2	30.26
Sep.	15.56	23.89	7.22	36.67	0.00	7.6	49.60
Oct.	18.34	26.67	10.00	41.67	1.11	12.7	75.60
Nov.	21.39	30.00	12.78	44.44	3.89	15.2	102.69
Dec.	22.78	31.67	13.89	45.00	6.11	15.2	122.66
Year	17.94	25.74	10.14	39.26	2.27	165	873.67

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	396
Compensated thermicity index.....(Itc):	396
Simple continentality index.....(Ic):	13.0
Diurnality index.....(Id):	17.8
Annual ombrothermic index.....(Io):	0.77
Monthly estival ombrothermic index.....(Ios1):	0.22
Bimonthly estival ombrothermic index.....(Ios2):	0.43
Threemonthly estival ombrothermic index.....(Ios3):	0.51
Fourmonthly estival ombrothermic index.....(Ios4):	0.55
Annual ombro-evaporation index.....(Ioe):	0.91
Annual positive temperature.....(Tp):	2153
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	700
Positive precipitation.....(Pp):	165

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	4	8	0

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - Low Semihyperoceanic

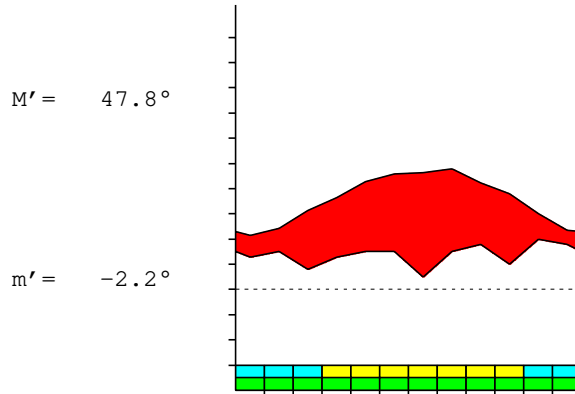
Bioclimate.....: MEDITERRANEAN DESERTIC-OCEANIC

Bioclimatic Belt...: UPPER THERMOMEDITERRANEAN UPPER ARID

RAWLINNA (AUSTRALIA)

185 m

P= 165 31° 0'S 125° 15'E 22/15 y.  
 T= 17.9° Ic= 13.0 Tp= 2153 Tn= 0  
 m= 3.9° M= 17.8° Itc= 396 Io= 0.8



MEDITERRANEAN DESERTIC-OCEANIC  
 UPPER THERMOMEDITERRANEAN UPPER ARID

WATER INDEX CARD RAWLINNA (AUSTRALIA)  
 Altitude: 185 m. Latitude: 31° 0'S

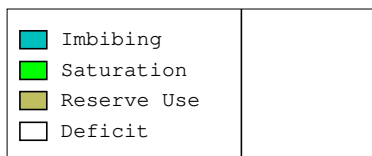
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	10.8	23	13	0	0	13	10	0	0	-0.4
Aug.	12.2	30	15	0	0	15	15	0	0	-0.4
Sep.	15.6	50	8	0	0	8	42	0	0	-0.8
Oct.	18.3	76	13	0	0	13	63	0	0	-0.8
Nov.	21.4	103	15	0	0	15	87	0	0	-0.8
Dec.	22.8	123	15	0	0	15	107	0	0	-0.8
Jan.	23.3	127	5	0	0	5	122	0	0	-0.9
Feb.	23.9	114	15	0	0	15	99	0	0	-0.8
Mar.	21.1	93	18	0	0	18	75	0	0	-0.8
Apr.	18.9	68	10	0	0	10	58	0	0	-0.8
May.	15.0	42	20	0	0	20	22	0	0	-0.5
Jun.	11.9	26	18	0	0	18	8	0	0	-0.3
Year	17.9	874	165	*	*	165	709	0	0	*

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

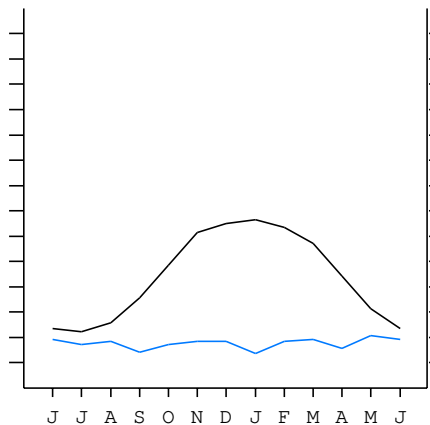
RAWLINNA (AUSTRALIA)

31°0'S 125°15'E 185 m 22/15 y.

T= 17.9 Ic= 13.0 MEDITERRANEAN DESERTIC-OCEANIC  
 m= 3.9 Tp= 2153 UPPER THERMOMEDITERRANEAN  
 M= 17.8 Tn= 0 UPPER ARID  
 M' = 47.8 Itc= 396  
 m' = -2.2 Io= 0.8  
 P= 165 mm  
 PE= 874 mm



All over the year,  
 there is hydric deficit



RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]  
 + Type .....: B. Oceanic  
 + Subtype .....: 1. Semihyperoceanic  
 + Variant .....: b. Low  
 Thermic types [A3.A3]  
 + Latitudinal zone ....: A. Warm  
 + Latitudinal belt ....: 3. Subtropical  
 + Thermic type .....: A. Warm  
 + Thermic subtype .....: 3. Subwarm  
 Bioclimatic types [B4.2a.3a]  
 + Macrobioclimate .....: B. MEDITERRANEAN  
 + Bioclimate .....: 4. DESERTIC-OCEANIC  
 + Bioclimatic variant ..:  
 + Thermic type.....: 2. THERMOMEDITERRANEAN  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 3. ARID  
 + Ombrothermic subtype : a. UPPER  
 Bioclimatic Classification .....: Mexc.Tme.Ari

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 79  
 Coldest semester of the year.....(Psw): 86  
 Warmest four months period of the year.....(Pcm1): 51  
 Following warmest four months period.....(Pcm2): 66  
 Positive precipitation dryest 3 months.....(Ppd): 36  
 Positive precipitation dryest 2 months.....(Ppd2): 20  
 Positive precipitation dryest 1 month.....(Ppd1): 5  
 Positive precipitation warmest 3 months.....(Pps): 36  
 Positive precipitation warmest 2 months.....(Pps2): 20  
 Positive precipitation warmest 1 month.....(Pps1): 15  
 Positive precipitation coldest 3 months.....(Ppw): 46  
 Positive precipitation coldest 2 months.....(Ppw2): 31  
 Positive precipitation coldest 1 month.....(Ppw1): 13

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	45	35	35	48

Seasonal rainfall rhythms: F > W > P > S

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 23.9  
 Average coldest month [T].....(Tmin): 10.8  
 Maximum temp. warmest month [M].....(Tmmax): 32.8  
 Minimum temp. coldest month [m].....(Tmmin): 3.9  
 Absolute Max.temp. warmest month [M'].....(Tamax): 47.8  
 Absolute Min.temp. coldest month [m'].....(Tamin): -2.2  
 First warmest contrasted month [M].....(Tcmax): 32.8 (2)  
 First coldest contrasted month [m].....(Tcmin): 15.0 (2)  
 Estival temperature.....(Ts): 700  
 Positive temperature dryest 3 months.....(Tpd): 386  
 Positive temperature dryest 2 months.....(Tpd2): 472  
 Positive temperature dryest 1 month.....(Tpd1): 233  
 Positive temperature warmest 3 months.....(Tps): 700  
 Positive temperature warmest 2 months.....(Tps2): 472  
 Positive temperature warmest 1 month.....(Tps1): 239  
 Positive temperature coldest 3 months.....(Tpw): 350  
 Positive temperature coldest 2 months.....(Tpw2): 228  
 Positive temperature coldest 1 month.....(Tpw1): 108

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 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

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 5.29  
 Mediterranean index of January.....(Im1): 24.96  
 Mediterranean index of January & February.....(Im2): 11.89  
 Mediterranean index of December to February...(Im3): 10.26

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	152	51	152	178	102	203	178	127	152	76	127	152
Tp	228	233	239	211	189	150	119	108	122	156	183	214
Io (Iom)	0.67	0.22	0.64	0.84	0.54	1.35	1.49	1.17	1.24	0.49	0.69	0.71
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	355 / 700			483 / 550			457 / 350			355 / 553		
Io (Iot)	0.507			0.878			1.306			0.642		
Semesters	December-May						June-November					
Pp(x10)/Tp	838 / 1250						812 / 903					
Io (Iosm)	0.670						0.899					

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 1650/2153=0.77 Weak upper arid (8) [1394]

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	152	51	152	178	102	203	178	127	152	76	127	152
Tp [T*10]	228	233	239	211	189	150	119	108	122	156	183	214
Iom [Pp/Tp]	67	22	64	84	54	135	149	117	124	49	69	71
Avm [200-Iom]	133	178	136	116	146	65	51	83	76	151	131	129
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	355 / 700			483 / 550			457 / 350			355 / 553		
Iot [Pp/Tp]	51			88			131			64		
Avs E[Avm<200]	448			326			209			411		
Lower hyperarid [1]							Strong lower arid [1]					
Weak lower arid [6]							Strong upper arid [1]					
Weak upper arid [2]							Strong lower semiarid [1]					
Weak lower semiarid [4]												

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp):	13.05
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....		22.67
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....		19.82
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....		1.15
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T] .....		9.20
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....		5.91
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....		15.57
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P] .....		10.87
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE] .....		0.19
+ Arid (0.2>Im>0.05)		
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....		2.50
+ Very low (K<60)		

RAWLINNA (AUSTRALIA)

Latitude: 31°0'S Longitude: 125°15'E Altitude: 185 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

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

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.01	0.05	0.06	0.03	0.08	0.08	0.05	0.06	0.03	0.04	0.05	0.05
T-E ratio	10.50	10.75	9.50	8.50	6.75	5.37	4.88	5.50	7.00	8.25	9.63	10.25
Precipitation-effectiveness: 5.99						Temperature-efficiency .....						96.89
Moisture Index [MI=100*(P-PE)/PE] .....												-81.11
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE] .....												81.11
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE .....												873.67
+ Third mesothermic (855<PE<997)												

