

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

WAVE HILL (AUSTRALIA)

Altitude: 213 m.

Latitude: 17°30'S Longitude: 130°57'E

Temperature observation period.: 1970-1994 (25)

Rainfall observation period....: 1970-1994 (25)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	30.84	37.78	23.89	44.44	16.67	99.1	192.37
Feb.	30.84	37.78	23.89	44.44	13.89	111.8	168.53
Mar.	29.17	35.56	22.78	42.78	13.89	76.2	164.71
Apr.	26.11	33.89	18.33	41.11	10.00	7.6	121.18
May.	23.06	30.56	15.56	38.33	5.56	5.1	75.03
Jun.	20.28	27.78	12.78	36.11	3.33	2.5	43.34
Jul.	19.45	27.78	11.11	35.56	3.33	5.1	38.49
Aug.	22.23	30.56	13.89	37.22	3.89	0.8	67.14
Sep.	25.83	34.44	17.22	40.56	7.22	2.5	119.84
Oct.	29.73	37.78	21.67	43.89	12.78	17.8	175.87
Nov.	31.39	38.89	23.89	45.56	13.33	45.7	188.61
Dec.	31.67	38.89	24.44	45.00	16.67	83.8	201.64
Year	26.72	34.31	19.12	41.25	10.05	458	1556.8

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	656
Compensated thermicity index.....(Itc):	656
Simple continentality index.....(Ic):	12.2
Diurnality index.....(Id):	17.2
Annual ombrothermic index.....(Io):	1.43
Monthly dry ombrothermic index.....(Iod1):	0.04
Bimonthly dry ombrothermic index.....(Iod2):	0.14
Three monthly dry ombrothermic index.....(Iod3):	0.14
Four monthly dry ombrothermic index.....(Iod4):	0.16
Annual ombro-evaporation index.....(Ioe):	18.41
Annual positive temperature.....(Tp):	3206
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	620
Positive precipitation.....(Pp):	458

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	4	1	7	0

Latitudinal Belt...: Eutropical

Continentalty.....: Oceanic - Low Semihyperoceanic

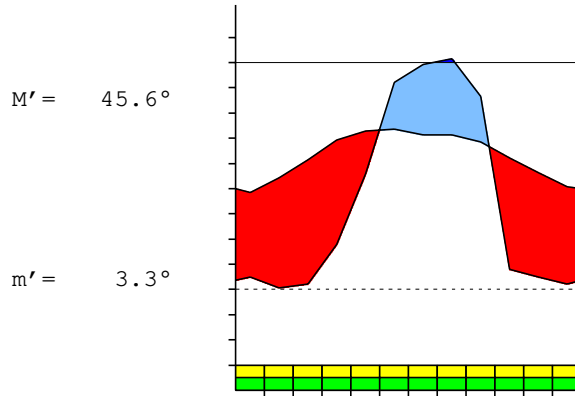
Bioclimate(Variant): TROPICAL XERIC (SEMIARID)

Bioclimatic Belt...: LOW THERMOTROPICAL LOW SEMIARID

WAVE HILL (AUSTRALIA)

213 m

P= 458 17° 30'S 130° 57'E 25/25 y.  
 T= 26.7° Ic= 12.2 Tp= 3206 Tn= 0  
 m= 11.1° M= 27.8° Itc= 656 Io= 1.4



TROPICAL XERIC (SEMIARID)  
 LOW THERMOTROPICAL LOW SEMIARID

WATER INDEX CARD WAVE HILL (AUSTRALIA)  
 Altitude: 213 m. Latitude: 17° 30'S

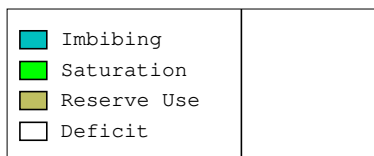
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	19.5	38	5	0	0	5	33	0	0	-0.8
Aug.	22.2	67	1	0	0	1	66	0	0	-0.9
Sep.	25.8	120	3	0	0	3	117	0	0	-0.9
Oct.	29.7	176	18	0	0	18	158	0	0	-0.8
Nov.	31.4	189	46	0	0	46	143	0	0	-0.7
Dec.	31.7	202	84	0	0	84	118	0	0	-0.5
Jan.	30.8	192	99	0	0	99	93	0	0	-0.4
Feb.	30.8	169	112	0	0	112	57	0	0	-0.3
Mar.	29.2	165	76	0	0	76	89	0	0	-0.5
Apr.	26.1	121	8	0	0	8	114	0	0	-0.9
May.	23.1	75	5	0	0	5	70	0	0	-0.9
Jun.	20.3	43	3	0	0	3	41	0	0	-0.9
Year	26.7	1557	458	*	*	458	1099	0	0	*

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

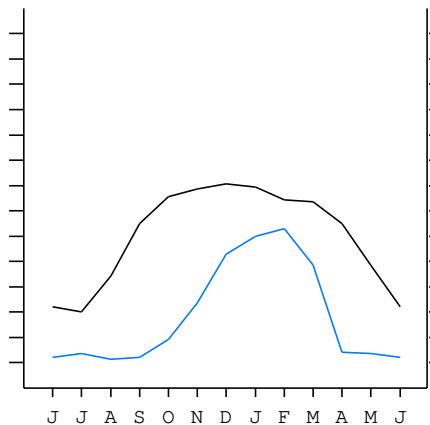
WAVE HILL (AUSTRALIA)

17°30'S 130°57'E 213 m 25/25 y.

T= 26.7 Ic= 12.2 TROPICAL XERIC (SEMIARID)  
 m= 11.1 Tp= 3206 LOW THERMOTROPICAL  
 M= 27.8 Tn= 0 LOW SEMIARID  
 M' = 45.6 Itc= 656  
 m' = 3.3 Io= 1.4  
 P= 458 mm  
 PE= 1557 mm



All over the year,  
 there is hydric deficit



WAVE HILL (AUSTRALIA)

Latitude: 17°30'S Longitude: 130°57'E Altitude: 213 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]  
 + Type .....: B. Oceanic  
 + Subtype .....: 1. Semihyperoceanic  
 + Variant .....: b. Low  
 Thermic types [A2.A1]  
 + Latitudinal zone ....: A. Warm  
 + Latitudinal belt ....: 2. Eutropical  
 + Thermic type .....: A. Warm  
 + Thermic subtype .....: 1. Torrid  
 Bioclimatic types [A3.2b.4b]  
 + Macrobioclimate .....: A. TROPICAL  
 + Bioclimate .....: 3. XERIC  
 + Bioclimatic variant ..:  
 + Thermic type.....: 2. THERMOTROPICAL  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 4. SEMIARID  
 + Ombrothermic subtype : b. LOW  
 Bioclimatic Classification .....: Trxe.Ttr.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 434  
 Coldest semester of the year.....(Psw): 24  
 Warmest four months period of the year.....(Pcm1): 340  
 Following warmest four months period.....(Pcm2): 91  
 Positive precipitation dryest 3 months.....(Ppd): 8  
 Positive precipitation dryest 2 months.....(Ppd2): 3  
 Positive precipitation dryest 1 month.....(Ppd1): 1  
 Positive precipitation warmest 3 months.....(Pps): 229  
 Positive precipitation warmest 2 months.....(Pps2): 130  
 Positive precipitation warmest 1 month.....(Pps1): 84  
 Positive precipitation coldest 3 months.....(Ppw): 8  
 Positive precipitation coldest 2 months.....(Ppw2): 8  
 Positive precipitation coldest 1 month.....(Ppw1): 5

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	8	66	294	88

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.7  
 Average coldest month [T].....(Tmin): 19.5  
 Maximum temp. warmest month [M].....(Tmmax): 38.9  
 Minimum temp. coldest month [m].....(Tmmin): 11.1  
 Absolute Max.temp. warmest month [M'].....(Tamax): 45.6  
 Absolute Min.temp. coldest month [m'].....(Tamin): 3.3  
 First warmest contrasted month [M].....(Tcmax): 34.4 (9)  
 First coldest contrasted month [m].....(Tcmin): 17.2 (9)  
 Dry station temperature.....(Td): 620  
 Positive temperature dryest 3 months.....(Tpd): 620  
 Positive temperature dryest 2 months.....(Tpd2): 481  
 Positive temperature dryest 1 month.....(Tpd1): 222  
 Positive temperature warmest 3 months.....(Tps): 939  
 Positive temperature warmest 2 months.....(Tps2): 631  
 Positive temperature warmest 1 month.....(Tps1): 317  
 Positive temperature coldest 3 months.....(Tpw): 620  
 Positive temperature coldest 2 months.....(Tpw2): 397  
 Positive temperature coldest 1 month.....(Tpw1): 195

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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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 3.40  
 Mediterranean index of January.....(Im1): No  
 Mediterranean index of January & February.....(Im2): No  
 Mediterranean index of December to February...(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	838	991	1118	762	76	51	25	51	8	25	178	457
Tp	317	308	308	292	261	231	203	195	222	258	297	314
Io (Iom)	2.65	3.21	3.63	2.61	0.29	0.22	0.12	0.26	0.04	0.10	0.60	1.46
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	2947 / 934			889 / 783			84 / 620			660 / 869		
Io (Iot)	3.157			1.135			0.136			0.759		
Semesters	December-May						June-November					
Pp(x10)/Tp	3836 / 1717						744 / 1489					
Io (Iosm)	2.234						0.500					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4580/3206=1.43 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	838	991	1118	762	76	51	25	51	8	25	178	457
Tp [T*10]	317	308	308	292	261	231	203	195	222	258	297	314
Iom [Pp/Tp]	265	321	363	261	29	22	12	26	4	10	60	146
Avm [200-Iom]	***	***	***	***	171	178	188	174	196	190	140	54
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	2947 / 934			889 / 783			84 / 620			660 / 869		
Iot [Pp/Tp]	316			113			14			76		
Avs E[Avm<200]	***			***			558			385		
Lower ultrahyperarid [2]						Upper ultrahyperarid [2]						
Lower hyperarid [3]						Weak lower arid [1]						
Strong upper arid [1]						Weak lower semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp): 12.22
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....	48.68
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....	30.99
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....	1.79
+ Continental (1.7<CI<2.3)	
Rainfall Index of Lang (1925) [R=P/T] .....	17.14
+ Steppic (40>R>0)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....	12.47
+ Arid -steppic- (15>Ia>5)	
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....	32.97
+ Semiarid (50>Q>30)	
I of Dantin & Revenga (1940) [DR=100*T/P] .....	5.83
+ Arid (6>DR>3)	
Aridity Index of UNEP [I=P/PE] .....	0.29
+ Semiarid (0.5>Im>0.2)	
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....	27.29
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....

- + Climate .....
- + Region .....
- + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.32	0.37	0.25	0.02	0.01	0.01	0.02	0.00	0.01	0.05	0.13	0.26
T-E ratio	13.88	13.88	13.13	11.75	10.38	9.13	8.75	10.00	11.62	13.38	14.13	14.25
Precipitation-effectiveness: 14.50						Temperature-efficiency .....						144.27
Moisture Index [MI=100*(P-PE)/PE] .....												-70.58
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE] .....												70.58
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE .....												1556.77
+ Megathermic (PE>1440)												

