

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

WOOMERA AERODROME (AUSTRALIA)

Altitude: 165 m.

Latitude: 31°8'S Longitude: 136°49'E

Temperature observation period.: 1951-1993 (43)

Rainfall observation period....: 1949-1990 (42)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	26.62	34.23	19.27	0.00	0.00	16.1	163.75
Feb.	26.15	32.56	19.89	0.00	0.00	21.2	135.10
Mar.	23.67	29.55	17.85	0.00	0.00	16.7	113.38
Apr.	19.23	23.94	14.51	0.00	0.00	13.3	66.42
May.	14.81	19.08	10.63	0.00	0.00	23.1	37.28
Jun.	12.18	15.11	8.94	0.00	0.00	15.0	23.34
Jul.	11.24	14.45	7.95	0.00	0.00	17.5	20.96
Aug.	12.59	16.54	8.41	0.00	0.00	14.6	28.20
Sep.	15.59	21.63	9.28	0.00	0.00	15.7	45.50
Oct.	19.10	24.75	13.05	0.00	0.00	15.5	77.23
Nov.	22.27	28.70	15.70	0.00	0.00	17.2	107.63
Dec.	24.73	30.28	19.23	0.00	0.00	12.1	141.57
Year	19.01	24.24	13.73	0.00	0.00	198	960.37

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	414
Compensated thermicity index.....(Itc):	414
Simple continentality index.....(Ic):	15.4
Diurnality index.....(Id):	15.0
Annual ombrothermic index.....(Io):	0.87
Monthly estival ombrothermic index.....(Ios1):	0.49
Bimonthly estival ombrothermic index.....(Ios2):	0.71
Threemonthly estival ombrothermic index.....(Ios3):	0.64
Fourmonthly estival ombrothermic index.....(Ios4):	0.67
Annual ombro-evaporation index.....(Ioe):	0.95
Annual positive temperature.....(Tp):	2282
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	775
Positive precipitation.....(Pp):	198

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	5	7	0

Latitudinal Belt...: Subtropical

Continentality.....: Oceanic - Low Euoceanic

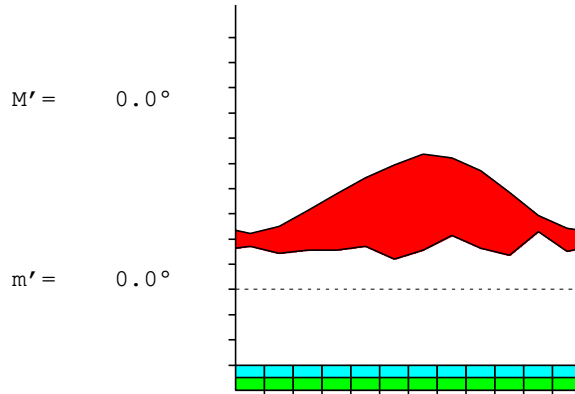
Bioclimate.....: MEDITERRANEAN DESERTIC-OCEANIC

Bioclimatic Belt...: LOW THERMOMEDITERRANEAN UPPER ARID

WOOMERA AERODROME (AUSTRALIA)

165 m

P= 198 31° 8'S 136° 49'E 43/42 y.
 T= 19.0° Ic= 15.4 Tp= 2282 Tn= 0
 m= 7.9° M= 14.4° Itc= 414 Io= 0.9



MEDITERRANEAN DESERTIC-OCEANIC
 LOW THERMOMEDITERRANEAN UPPER ARID

WATER INDEX CARD WOOMERA AERODROME (AUSTRALIA)
 Altitude: 165 m. Latitude: 31° 8'S

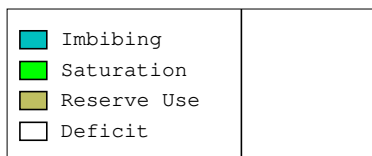
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	11.2	21	17	0	0	17	3	0	0	-0.1
Aug.	12.6	28	15	0	0	15	14	0	0	-0.4
Sep.	15.6	46	16	0	0	16	30	0	0	-0.6
Oct.	19.1	77	15	0	0	15	62	0	0	-0.7
Nov.	22.3	108	17	0	0	17	90	0	0	-0.8
Dec.	24.7	142	12	0	0	12	130	0	0	-0.9
Jan.	26.6	164	16	0	0	16	148	0	0	-0.9
Feb.	26.1	135	21	0	0	21	114	0	0	-0.8
Mar.	23.7	113	17	0	0	17	97	0	0	-0.8
Apr.	19.2	66	13	0	0	13	53	0	0	-0.8
May.	14.8	37	23	0	0	23	14	0	0	-0.3
Jun.	12.2	23	15	0	0	15	8	0	0	-0.3
Year	19.0	960	198	*	*	198	763	0	0	*

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

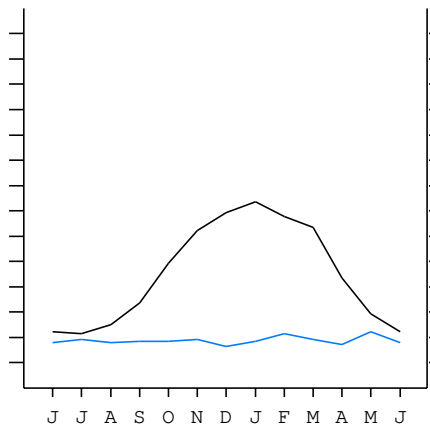
WOOMERA AERODROME (AUSTRALIA)

31°8'S 136°49'E 165 m 43/42 y.

T= 19.0 Ic= 15.4 MEDITERRANEAN DESERTIC-OCEANIC
 m= 7.9 Tp= 2282 LOW THERMOMEDITERRANEAN
 M= 14.4 Tn= 0 UPPER ARID
 M' = 0.0 Itc= 414
 m' = 0.0 Io= 0.9
 P= 198 mm ———
 PE= 960 mm ———



All over the year,
 there is hydric deficit



WOOMERA AERODROME (AUSTRALIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2b]
 + Type: B. Oceanic
 + Subtype: 2. Euoceanic
 + Variant: b. Low
 Thermic types [A3.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm
 Bioclimatic types [B4.2b.3a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 4. DESERTIC-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 3. ARID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Mexc.Tme.Ari

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 96
 Coldest semester of the year.....(Psw): 101
 Warmest four months period of the year.....(Pcm1): 66
 Following warmest four months period.....(Pcm2): 69
 Positive precipitation dryest 3 months.....(Ppd): 45
 Positive precipitation dryest 2 months.....(Ppd2): 28
 Positive precipitation dryest 1 month.....(Ppd1): 12
 Positive precipitation warmest 3 months.....(Pps): 49
 Positive precipitation warmest 2 months.....(Pps2): 37
 Positive precipitation warmest 1 month.....(Pps1): 16
 Positive precipitation coldest 3 months.....(Ppw): 47
 Positive precipitation coldest 2 months.....(Ppw2): 32
 Positive precipitation coldest 1 month.....(Ppw1): 17

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	47	48	49	53

Seasonal rainfall rhythms: F > S > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 26.6
 Average coldest month [T].....(Tmin): 11.2
 Maximum temp. warmest month [M].....(Tmmax): 34.2
 Minimum temp. coldest month [m].....(Tmmin): 7.9
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
 First warmest contrasted month [M].....(Tcmax): 34.2 (1)
 First coldest contrasted month [m].....(Tcmin): 19.3 (1)
 Estival temperature.....(Ts): 775
 Positive temperature dryest 3 months.....(Tpd): 661
 Positive temperature dryest 2 months.....(Tpd2): 514
 Positive temperature dryest 1 month.....(Tpd1): 247
 Positive temperature warmest 3 months.....(Tps): 775
 Positive temperature warmest 2 months.....(Tps2): 528
 Positive temperature warmest 1 month.....(Tps1): 266
 Positive temperature coldest 3 months.....(Tpw): 360
 Positive temperature coldest 2 months.....(Tpw2): 234
 Positive temperature coldest 1 month.....(Tpw1): 112

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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

WOOMERA AERODROME (AUSTRALIA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 4.86
 Mediterranean index of January.....(Im1): 10.19
 Mediterranean index of January & February.....(Im2): 8.03
 Mediterranean index of December to February...(Im3): 8.93

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	121	161	212	167	133	231	150	175	146	157	155	172
Tp	247	266	262	237	192	148	122	112	126	156	191	223
Io (Iom)	0.49	0.60	0.81	0.71	0.69	1.56	1.23	1.56	1.16	1.01	0.81	0.77
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	493 / 775			530 / 577			471 / 360			483 / 570		
Io (Iot)	0.636			0.919			1.307			0.849		
Semesters	December-May						June-November					
Pp(x10)/Tp	1023 / 1352						954 / 930					
Io (Iosm)	0.757						1.026					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 1978/2282=0.87 Weak upper arid (8) [1261]

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	121	161	212	167	133	231	150	175	146	157	155	172
Tp [T*10]	247	266	262	237	192	148	122	112	126	156	191	223
Iom [Pp/Tp]	49	60	81	71	69	156	123	156	116	101	81	77
Avm [200-Iom]	151	140	119	129	131	44	77	44	84	99	119	123
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	493 / 775			530 / 577			471 / 360			483 / 570		
Iot [Pp/Tp]	64			92			131			85		
Avs E[Avm<200]	410			305			205			341		
Strong lower arid [1]						Weak lower arid [3]						
Strong upper arid [2]						Weak upper arid [4]						
Strong lower semiarid [2]						Weak lower semiarid [2]						
Strong upper semiarid [2]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	15.38
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		30.17
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		25.75
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.35
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		10.40
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		6.82
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		17.84
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		9.62
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.21
+ Semiarid (0.5>Im>0.2)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		2.69
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.05	0.06	0.05	0.05	0.09	0.06	0.08	0.06	0.06	0.05	0.06	0.04
T-E ratio	11.98	11.77	10.65	8.65	6.66	5.48	5.06	5.67	7.02	8.60	10.02	11.13
Precipitation-effectiveness: 7.07						Temperature-efficiency						102.68
Moisture Index [MI=100*(P-PE)/PE]												-79.41
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												79.41
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												960.37
+ Third mesothermic (855<PE<997)												

