

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

PERTH S S (AUSTRALIA)

Altitude: 20 m.

Latitude: 31°56'S Longitude: 115°58'E

Temperature observation period.: 1948-1994 (47)

Rainfall observation period....: 1931-1994 (64)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	23.33	29.44	17.22	43.89	6.11	7.6	128.38
Feb.	23.33	29.44	17.22	44.44	7.78	10.2	110.34
Mar.	21.67	27.22	16.11	41.11	6.67	20.3	97.98
Apr.	19.17	24.44	13.89	37.78	2.22	43.2	69.84
May.	16.11	20.56	11.67	32.22	1.11	129.5	48.34
Jun.	13.89	17.78	10.00	27.78	-0.56	180.3	33.83
Jul.	13.06	17.22	8.89	24.44	0.00	170.2	31.94
Aug.	13.34	17.78	8.89	28.33	1.11	144.8	35.47
Sep.	14.72	19.44	10.00	32.78	0.00	86.4	44.88
Oct.	16.39	21.11	11.67	35.00	3.89	55.9	61.44
Nov.	19.17	24.44	13.89	40.56	4.44	20.3	84.54
Dec.	21.67	27.22	16.11	42.22	5.00	12.7	112.77
Year	17.99	23.01	12.96	35.88	3.15	881	859.75

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	441
Compensated thermicity index.....(Itc):	441
Simple continentality index.....(Ic):	10.3
Diurnality index.....(Id):	12.2
Annual ombrothermic index.....(Io):	4.08
Monthly estival ombrothermic index.....(Ios1):	0.33
Bimonthly estival ombrothermic index.....(Ios2):	0.38
Threemonthly estival ombrothermic index.....(Ios3):	0.45
Fourmonthly estival ombrothermic index.....(Ios4):	0.58
Annual ombro-evaporation index.....(Ioe):	1.03
Annual positive temperature.....(Tp):	2159
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	683
Positive precipitation.....(Pp):	881

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	5	2	1	4	0

Latitudinal Belt...: Subtropical

Continentality.....: Hyperoceanic - Low Subhyperoceanic

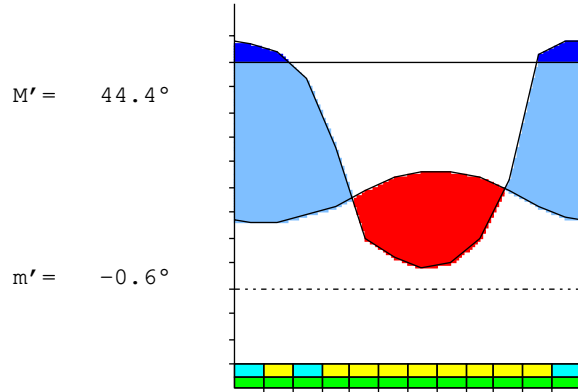
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW THERMOMEDITERRANEAN LOW SUBHUMID

PERTH S S (AUSTRALIA)

20 m

P= 881 31° 56'S 115° 58'E 47/64 y.  
 T= 18.0 ° Ic= 10.3 Tp= 2159 Tn= 0  
 m= 8.9 ° M= 17.2 ° Itc= 441 Io= 4.1



MEDITERRANEAN PLUVISEASONAL-OCEANIC  
 LOW THERMOMEDITERRANEAN LOW SUBHUMID

WATER INDEX CARD PERTH S S (AUSTRALIA)  
 Altitude: 20 m. Latitude: 31° 56'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	13.1	32	170	0	100	32	0	138	101	4.3
Aug.	13.3	35	145	0	100	35	0	109	105	3.0
Sep.	14.7	45	86	0	100	45	0	42	73	0.9
Oct.	16.4	61	56	-6	94	61	0	0	37	0.0
Nov.	19.2	85	20	-64	30	85	0	0	18	-0.7
Dec.	21.7	113	13	-30	0	43	70	0	9	-0.8
Jan.	23.3	128	8	0	0	8	121	0	5	-0.9
Feb.	23.3	110	10	0	0	10	100	0	2	-0.9
Mar.	21.7	98	20	0	0	20	78	0	1	-0.7
Apr.	19.2	70	43	0	0	43	27	0	1	-0.3
May.	16.1	48	130	81	81	48	0	0	0	1.6
Jun.	13.9	34	180	19	100	34	0	128	64	4.3
Year	18.0	860	881	*	*	465	395	417	417	*

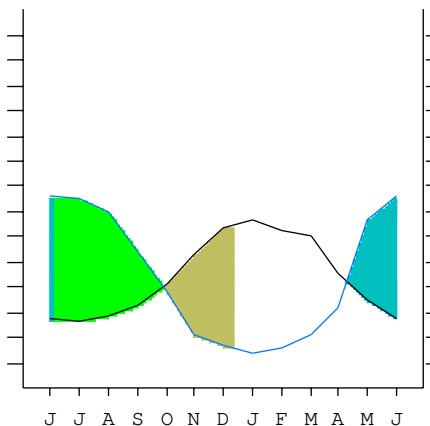
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration  
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

PERTH S S (AUSTRALIA)

31°56'S 115°58'E 20 m 47/64 y.

T= 18.0 Ic= 10.3 MEDITERRANEAN PLUVISEASONAL-OCEANIC  
 m= 8.9 Tp= 2159 LOW THERMOMEDITERRANEAN  
 M= 17.2 Tn= 0 LOW SUBHUMID  
 M' = 44.4 Itc= 441  
 m' = -0.6 Io= 4.1  
 P= 881 mm ———  
 PE= 860 mm ———

Imbibing	8 Apr.
Saturation	4 Jun.
Reserve Use	27 Sep.
Deficit	10 Dec.



PERTH S S (AUSTRALIA)

Latitude: 31°56'S Longitude: 115°58'E Altitude: 20 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3b]  
 + Type .....: A. Hyperoceanic  
 + Subtype .....: 3. Subhyperoceanic  
 + 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 [B8.2b.6b]  
 + Macrobioclimate .....: B. MEDITERRANEAN  
 + Bioclimate .....: 8. PLUVISEASONAL-OCEANIC  
 + Bioclimatic variant .:  
 + Thermic type.....: 2. THERMOMEDITERRANEAN  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....Mepo.Tme.Shu.Sho

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 114  
 Coldest semester of the year.....(Psw): 767  
 Warmest four months period of the year.....(Pcm1): 51  
 Following warmest four months period.....(Pcm2): 523  
 Positive precipitation dryest 3 months.....(Ppd): 31  
 Positive precipitation dryest 2 months.....(Ppd2): 18  
 Positive precipitation dryest 1 month.....(Ppd1): 8  
 Positive precipitation warmest 3 months.....(Pps): 38  
 Positive precipitation warmest 2 months.....(Pps2): 18  
 Positive precipitation warmest 1 month.....(Pps1): 8  
 Positive precipitation coldest 3 months.....(Ppw): 495  
 Positive precipitation coldest 2 months.....(Ppw2): 315  
 Positive precipitation coldest 1 month.....(Ppw1): 170

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	495	162	30	193

Seasonal rainfall rhythms: W > F > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 23.3  
 Average coldest month [T].....(Tmin): 13.1  
 Maximum temp. warmest month [M].....(Tmax): 29.4  
 Minimum temp. coldest month [m].....(Tmin): 8.9  
 Absolute Max.temp. warmest month [M'].....(Tamax): 44.4  
 Absolute Min.temp. coldest month [m'].....(Tamin): -0.6  
 First warmest contrasted month [M].....(Tcmax): 29.4 (1)  
 First coldest contrasted month [m].....(Tcmin): 17.2 (1)  
 Estival temperature.....(Ts): 683  
 Positive temperature dryest 3 months.....(Tpd): 683  
 Positive temperature dryest 2 months.....(Tpd2): 467  
 Positive temperature dryest 1 month.....(Tpd1): 233  
 Positive temperature warmest 3 months.....(Tps): 683  
 Positive temperature warmest 2 months.....(Tps2): 467  
 Positive temperature warmest 1 month.....(Tps1): 233  
 Positive temperature coldest 3 months.....(Tpw): 403  
 Positive temperature coldest 2 months.....(Tpw2): 264  
 Positive temperature coldest 1 month.....(Tpw1): 131

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.98  
 Mediterranean index of January.....(Im1): 16.89  
 Mediterranean index of January & February....(Im2): 13.41  
 Mediterranean index of December to February...(Im3): 11.52

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	127	76	102	203	432	1295	1803	1702	1448	864	559	203
Tp	217	233	233	217	192	161	139	131	133	147	164	192
Io (Iom)	0.59	0.33	0.44	0.94	2.25	8.04	13.0	13.0	10.9	5.87	3.41	1.06
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	305 / 683			1930 / 570			4953 / 403			1626 / 503		
Io (Iot)	0.446			3.389			12.29			3.234		
Semesters	December-May						June-November					
Pp(x10)/Tp	2235 / 1253						6579 / 906					
Io (Iosm)	1.784						7.264					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 8814/2159=4.08 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	127	76	102	203	432	1295	1803	1702	1448	864	559	203
Tp [T*10]	217	233	233	217	192	161	139	131	133	147	164	192
Iom [Pp/Tp]	59	33	44	94	225	804	\$\$	\$\$	\$\$	587	341	106
Avm [200-Iom]	141	167	156	106	***	***	***	***	***	***	***	94
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	305 / 683			1930 / 570			4953 / 403			1626 / 503		
Iot [Pp/Tp]	45			339			1229			323		
Avs E[Avm<200]	465			***			***			***		
Upper hyperarid [1]							Strong lower arid [2]					
Weak lower arid [1]							Weak upper arid [1]					
Strong lower semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp): 10.27
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....	12.61
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....	12.13
+ Hyperoceanic (-20<CI<20)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....	0.88
+ Oceanic (0.6<CI<1.1)	
Rainfall Index of Lang (1925) [R=P/T] .....	49.00
+ Semiarid (60>R>40)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....	31.49
+ Humid (60>Ia>30)	
I of Emberger (1930) [Q=100*P/(Tmmax <sup>2</sup> -Tmmin <sup>2</sup> )] .....	111.90
+ Humid (Q>90)	
I of Dantin & Revenga (1940) [DR=100*T/P] .....	2.04
+ Semiarid (3>DR>2)	
Aridity Index of UNEP [I=P/PE] .....	1.03
+ Humid (I>0.65)	
Potencial Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P].....	36.88
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate ..... A. Warm and temperate warm  
 + Region ..... 3. Termoxeroteric (Mediterranean warm)  
 + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.02	0.03	0.07	0.17	0.62	0.95	0.91	0.76	0.41	0.24	0.07	0.04
T-E ratio	10.50	10.50	9.75	8.63	7.25	6.25	5.88	6.00	6.62	7.38	8.63	9.75
Precipitation-effectiveness: 42.85						Temperature-efficiency .....: 97.13						
Moisture Index [MI=100*(P-PE)/PE] .....												
+ C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE] .....												
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....												
+ Strong surplus (20<HI)												
Potential Evapotranspiration PE .....												
+ Third mesothermic (855<PE<997)												

