

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

HALLS CREEK (AUSTRALIA)

Altitude: 374 m.

Latitude: 18°13'S Longitude: 127°46'E

Temperature observation period.: 1944-1980 (37)

Rainfall observation period....: 1950-1980 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	30.30	36.70	23.90	44.30	15.60	123.0	187.48
Feb.	29.80	36.10	23.30	43.80	12.20	109.0	160.29
Mar.	28.60	35.00	21.70	41.90	11.00	51.0	159.92
Apr.	25.30	33.30	17.80	39.90	7.20	15.0	110.94
May.	21.40	29.40	13.30	37.20	2.40	12.0	61.88
Jun.	18.60	27.20	10.60	35.00	0.20	8.0	35.99
Jul.	17.70	27.20	8.90	34.00	-1.10	9.0	31.59
Aug.	20.60	30.00	11.10	37.80	0.40	3.0	55.85
Sep.	24.30	33.90	15.00	40.20	3.00	3.0	99.37
Oct.	28.80	36.70	20.60	42.80	8.90	9.0	167.76
Nov.	30.70	37.80	23.30	43.70	11.70	22.0	182.65
Dec.	30.80	37.20	23.90	44.20	12.10	59.0	193.71
Year	25.57	33.38	17.78	40.40	6.97	423	1447.4

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	617
Compensated thermicity index.....(Itc):	617
Simple continentality index.....(Ic):	13.1
Diurnality index.....(Id):	18.9
Annual ombrothermic index.....(Io):	1.38
Monthly dry ombrothermic index.....(Iod1):	0.15
Bimonthly dry ombrothermic index.....(Iod2):	0.13
Three monthly dry ombrothermic index.....(Iod3):	0.24
Four monthly dry ombrothermic index.....(Iod4):	0.28
Annual ombro-evaporation index.....(Ioe):	7.46
Annual positive temperature.....(Tp):	3069
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	626
Positive precipitation.....(Pp):	423

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	1	1	2	8	0

Latitudinal Belt...: Eutropical

Continentalty.....: Oceanic - Low Semihyperoceanic

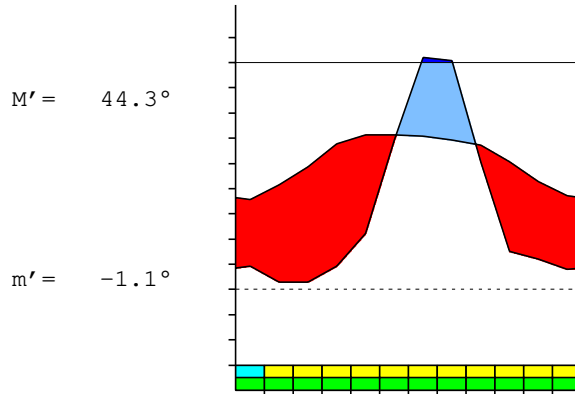
Bioclimate(Variant): TROPICAL XERIC (SEMIARID)

Bioclimatic Belt...: LOW THERMOTROPICAL LOW SEMIARID

HALLS CREEK (AUSTRALIA)

374 m

P= 423 18° 13'S 127° 46'E 37/31 y.
 T= 25.6° Ic= 13.1 Tp= 3069 Tn= 0
 m= 8.9° M= 27.2° Itc= 617 Io= 1.4



TROPICAL XERIC (SEMIARID)
 LOW THERMOTROPICAL LOW SEMIARID

WATER INDEX CARD HALLS CREEK (AUSTRALIA)
 Altitude: 374 m. Latitude: 18° 13'S

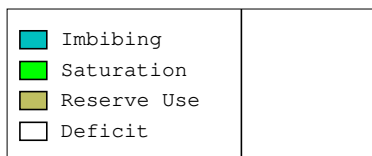
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	17.7	32	9	0	0	9	23	0	0	-0.7
Aug.	20.6	56	3	0	0	3	53	0	0	-0.9
Sep.	24.3	99	3	0	0	3	96	0	0	-0.9
Oct.	28.8	168	9	0	0	9	159	0	0	-0.9
Nov.	30.7	183	22	0	0	22	161	0	0	-0.8
Dec.	30.8	194	59	0	0	59	135	0	0	-0.6
Jan.	30.3	187	123	0	0	123	64	0	0	-0.3
Feb.	29.8	160	109	0	0	109	51	0	0	-0.3
Mar.	28.6	160	51	0	0	51	109	0	0	-0.6
Apr.	25.3	111	15	0	0	15	96	0	0	-0.8
May.	21.4	62	12	0	0	12	50	0	0	-0.8
Jun.	18.6	36	8	0	0	8	28	0	0	-0.7
Year	25.6	1447	423	*	*	423	1024	0	0	*

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

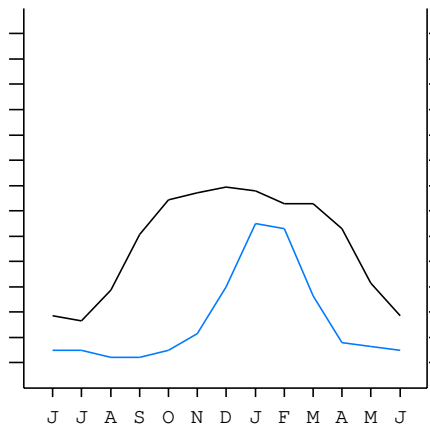
HALLS CREEK (AUSTRALIA)

18°13'S 127°46'E 374 m 37/31 y.

T= 25.6 Ic= 13.1 TROPICAL XERIC (SEMIARID)
 m= 8.9 Tp= 3069 LOW THERMOTROPICAL
 M= 27.2 Tn= 0 LOW SEMIARID
 M' = 44.3 Itc= 617
 m' = -1.1 Io= 1.4
 P= 423 mm ———
 PE= 1447 mm ———



All over the year,
 there is hydric deficit



HALLS CREEK (AUSTRALIA)

Latitude: 18°13'S Longitude: 127°46'E Altitude: 374 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

HALLS CREEK (AUSTRALIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 373
 Coldest semester of the year.....(Psw): 50
 Warmest four months period of the year.....(Pcm1): 313
 Following warmest four months period.....(Pcm2): 86
 Positive precipitation dryest 3 months.....(Ppd): 15
 Positive precipitation dryest 2 months.....(Ppd2): 6
 Positive precipitation dryest 1 month.....(Ppd1): 3
 Positive precipitation warmest 3 months.....(Pps): 204
 Positive precipitation warmest 2 months.....(Pps2): 81
 Positive precipitation warmest 1 month.....(Pps1): 59
 Positive precipitation coldest 3 months.....(Ppw): 20
 Positive precipitation coldest 2 months.....(Ppw2): 17
 Positive precipitation coldest 1 month.....(Ppw1): 9

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	20	34	291	78

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 30.8
 Average coldest month [T].....(Tmin): 17.7
 Maximum temp. warmest month [M].....(Tmmax): 37.8
 Minimum temp. coldest month [m].....(Tmmin): 8.9
 Absolute Max.temp. warmest month [M'].....(Tamax): 44.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -1.1
 First warmest contrasted month [M].....(Tcmax): 30.0 (8)
 First coldest contrasted month [m].....(Tcmin): 11.1 (8)
 Dry station temperature.....(Td): 626
 Positive temperature dryest 3 months.....(Tpd): 626
 Positive temperature dryest 2 months.....(Tpd2): 449
 Positive temperature dryest 1 month.....(Tpd1): 206
 Positive temperature warmest 3 months.....(Tps): 918
 Positive temperature warmest 2 months.....(Tps2): 615
 Positive temperature warmest 1 month.....(Tps1): 308
 Positive temperature coldest 3 months.....(Tpw): 569
 Positive temperature coldest 2 months.....(Tpw2): 363
 Positive temperature coldest 1 month.....(Tpw1): 177

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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					
Agelid.....[m' > 0] (Pf)	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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 3.42
 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)	590	1230	1090	510	150	120	80	90	30	30	90	220
Tp	308	303	298	286	253	214	186	177	206	243	288	307
Io (Iom)	1.92	4.06	3.66	1.78	0.59	0.56	0.43	0.51	0.15	0.12	0.31	0.72
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	2910 / 909			780 / 753			200 / 569			340 / 838		
Io (Iot)	3.201			1.036			0.351			0.406		
Semesters	December-May						June-November					
Pp(x10)/Tp	3690 / 1662						540 / 1407					
Io (Iosm)	2.220						0.384					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4230/3069=1.38 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	590	1230	1090	510	150	120	80	90	30	30	90	220
Tp [T*10]	308	303	298	286	253	214	186	177	206	243	288	307
Iom [Pp/Tp]	192	406	366	178	59	56	43	51	15	12	31	72
Avm [200-Iom]	8	***	***	22	141	144	157	149	185	188	169	128
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	2910 / 909			780 / 753			200 / 569			340 / 838		
Iot [Pp/Tp]	320			104			35			41		
Avs E[Avm<200]	***			306			492			485		
Upper ultrahyperarid [2]						Upper hyperarid [3]						
Strong lower arid [1]						Weak lower arid [3]						
Strong upper arid [1]						Weak upper arid [1]						
Weak upper semiarid [2]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 13.10
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 50.84
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 33.10
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.85
 + Continental (1.7<CI<2.3)
 Rainfall Index of Lang (1925) [R=P/T]: 16.54
 + Steppic (40>R>0)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 11.89
 + Arid -steppic- (15>Ia>5)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 31.34
 + Semiarid (50>Q>30)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 6.05
 + Extremely arid (DR>6)
 Aridity Index of UNEP [I=P/PE]: 0.29
 + Semiarid (0.5>Im>0.2)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 35.77
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region:
 + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.41	0.37	0.16	0.04	0.04	0.03	0.03	0.01	0.01	0.02	0.06	0.18
T-E ratio	13.63	13.41	12.87	11.38	9.63	8.37	7.97	9.27	10.93	12.96	13.82	13.86
Precipitation-effectiveness: 13.61						Temperature-efficiency: 138.10						
Moisture Index [MI=100*(P-PE)/PE]: -70.78 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]: 70.77 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 1447.42 + Megathermic (PE>1440)												

