

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

ALICE SPRINGS (AUSTRALIA)

Altitude: 546 m.

Latitude: 23°48'S Longitude: 133°53'E

Temperature observation period.: 1954-1994 (41)

Rainfall observation period....: 1964-1994 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	28.61	36.11	21.11	43.89	10.56	43.2	176.77
Feb.	27.78	35.00	20.56	42.78	8.33	33.0	147.20
Mar.	24.72	32.22	17.22	43.33	7.22	27.9	120.60
Apr.	19.72	27.22	12.22	37.22	2.22	10.2	64.75
May.	15.28	22.78	7.78	35.56	-2.22	15.2	34.76
Jun.	12.22	19.44	5.00	30.00	-5.56	12.7	19.44
Jul.	11.67	19.44	3.89	30.00	-7.22	7.6	18.23
Aug.	14.45	22.78	6.11	35.56	-3.89	7.6	32.10
Sep.	18.33	27.22	9.44	37.78	-0.56	7.6	56.77
Oct.	22.78	31.11	14.44	41.11	3.89	17.8	104.21
Nov.	25.84	33.89	17.78	42.22	5.56	30.5	141.52
Dec.	27.78	35.56	20.00	43.89	10.00	38.1	171.98
Year	20.76	28.56	12.96	38.61	2.36	251	1088.3

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	441
Compensated thermicity index.....(Itc):	441
Simple continentality index.....(Ic):	16.9
Diurnality index.....(Id):	17.8
Annual ombrothermic index.....(Io):	1.01
Monthly dry ombrothermic index.....(Iod1):	0.65
Bimonthly dry ombrothermic index.....(Iod2):	0.58
Three monthly dry ombrothermic index.....(Iod3):	0.51
Four monthly dry ombrothermic index.....(Iod4):	0.63
Annual ombro-evaporation index.....(Ioe):	3.13
Annual positive temperature.....(Tp):	2492
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	445
Positive precipitation.....(Pp):	251

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	6	6	0

Latitudinal Belt...: Subtropical

Continentality.....: Oceanic - Low Euoceanic

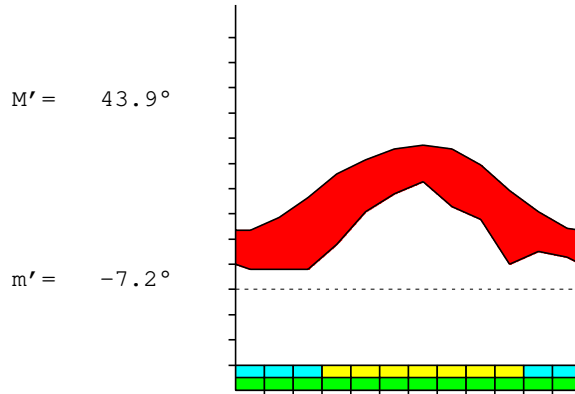
Bioclimate(Variant): TROPICAL XERIC (SEMIARID)

Bioclimatic Belt...: LOW MESOTROPICAL LOW SEMIARID

ALICE SPRINGS (AUSTRALIA)

546 m

P= 251 23° 48' S 133° 53' E 41/31 y.
 T= 20.8° Ic= 16.9 Tp= 2492 Tn= 0
 m= 3.9° M= 19.4° Itc= 441 Io= 1.0



TROPICAL XERIC (SEMIARID)
 LOW MESOTROPICAL LOW SEMIARID

WATER INDEX CARD ALICE SPRINGS (AUSTRALIA)
 Altitude: 546 m. Latitude: 23° 48' S

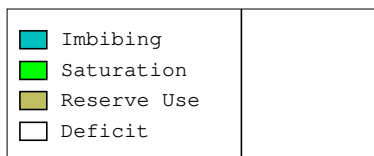
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	11.7	18	8	0	0	8	11	0	0	-0.5
Aug.	14.4	32	8	0	0	8	24	0	0	-0.7
Sep.	18.3	57	8	0	0	8	49	0	0	-0.8
Oct.	22.8	104	18	0	0	18	86	0	0	-0.8
Nov.	25.8	142	31	0	0	31	111	0	0	-0.7
Dec.	27.8	172	38	0	0	38	134	0	0	-0.7
Jan.	28.6	177	43	0	0	43	134	0	0	-0.7
Feb.	27.8	147	33	0	0	33	114	0	0	-0.7
Mar.	24.7	121	28	0	0	28	93	0	0	-0.7
Apr.	19.7	65	10	0	0	10	55	0	0	-0.8
May.	15.3	35	15	0	0	15	20	0	0	-0.5
Jun.	12.2	19	13	0	0	13	7	0	0	-0.3
Year	20.8	1088	251	*	*	251	837	0	0	*

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

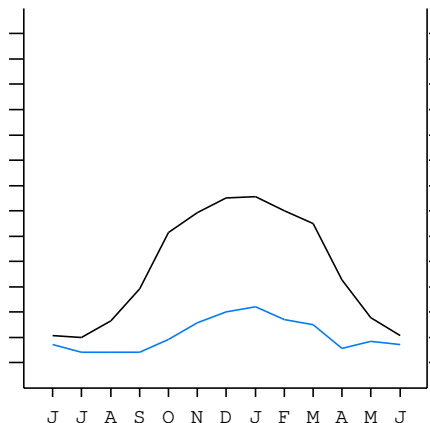
ALICE SPRINGS (AUSTRALIA)

23°48' S 133°53' E 546 m 41/31 y.

T= 20.8 Ic= 16.9 TROPICAL XERIC (SEMIARID)
 m= 3.9 Tp= 2492 LOW MESOTROPICAL
 M= 19.4 Tn= 0 LOW SEMIARID
 M' = 43.9 Itc= 441
 m' = -7.2 Io= 1.0
 P= 251 mm
 PE= 1088 mm



All over the year,
 there is hydric deficit



ALICE SPRINGS (AUSTRALIA)

Latitude: 23°48'S Longitude: 133°53'E Altitude: 546 m

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 [A3.3b.4b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant ..:
 + Thermic type.....: 3. MESOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trxe.Mtr.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 191
 Coldest semester of the year.....(Psw): 61
 Warmest four months period of the year.....(Pcm1): 145
 Following warmest four months period.....(Pcm2): 66
 Positive precipitation dryest 3 months.....(Ppd): 23
 Positive precipitation dryest 2 months.....(Ppd2): 15
 Positive precipitation dryest 1 month.....(Ppd1): 8
 Positive precipitation warmest 3 months.....(Pps): 114
 Positive precipitation warmest 2 months.....(Pps2): 76
 Positive precipitation warmest 1 month.....(Pps1): 43
 Positive precipitation coldest 3 months.....(Ppw): 28
 Positive precipitation coldest 2 months.....(Ppw2): 20
 Positive precipitation coldest 1 month.....(Ppw1): 8

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	27	55	114	53

Seasonal rainfall rhythms: S > P > F > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 28.6
 Average coldest month [T].....(Tmin): 11.7
 Maximum temp. warmest month [M].....(Tmmax): 36.1
 Minimum temp. coldest month [m].....(Tmmin): 3.9
 Absolute Max.temp. warmest month [M'].....(Tamax): 43.9
 Absolute Min.temp. coldest month [m'].....(Tamin): -7.2
 First warmest contrasted month [M].....(Tcmax): 27.2 (9)
 First coldest contrasted month [m].....(Tcmin): 9.4 (9)
 Dry station temperature.....(Td): 445
 Positive temperature dryest 3 months.....(Tpd): 445
 Positive temperature dryest 2 months.....(Tpd2): 261
 Positive temperature dryest 1 month.....(Tpd1): 117
 Positive temperature warmest 3 months.....(Tps): 842
 Positive temperature warmest 2 months.....(Tps2): 564
 Positive temperature warmest 1 month.....(Tps1): 286
 Positive temperature coldest 3 months.....(Tpw): 383
 Positive temperature coldest 2 months.....(Tpw2): 239
 Positive temperature coldest 1 month.....(Tpw1): 117

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 4.33
 Mediterranean index of January.....(Im1): 4.09
 Mediterranean index of January & February.....(Im2): 4.25
 Mediterranean index of December to February...(Im3): 4.34

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	381	432	330	279	102	152	127	76	76	76	178	305
Tp	278	286	278	247	197	153	122	117	145	183	228	258
Io (Iom)	1.37	1.51	1.19	1.13	0.52	0.99	1.04	0.65	0.53	0.41	0.78	1.18
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	1143 / 842			533 / 597			279 / 383			559 / 670		
Io (Iot)	1.358			0.892			0.728			0.835		
Semesters	December-May						June-November					
Pp(x10)/Tp	1676 / 1439						838 / 1053					
Io (Iosm)	1.165						0.796					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 2514/2492=1.01 [Weak upper arid \(8\) \[1270\]](#)

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	381	432	330	279	102	152	127	76	76	76	178	305
Tp [T*10]	278	286	278	247	197	153	122	117	145	183	228	258
Iom [Pp/Tp]	137	151	119	113	52	99	104	65	53	41	78	118
Avm [200-Iom]	63	49	81	87	148	101	96	135	147	159	122	82
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	1143 / 842			533 / 597			279 / 383			559 / 670		
Iot [Pp/Tp]	136			89			73			83		
Avs E[Avm<200]	193			336			378			362		
Strong lower arid [1]						Weak lower arid [3]						
Strong upper arid [3]						Weak upper arid [2]						
Strong lower semiarid [4]						Weak lower semiarid [2]						
Strong upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 16.94
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 50.96
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 37.77
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.90
 + Continental (1.7<CI<2.3)
 Rainfall Index of Lang (1925) [R=P/T]: 12.11
 + Steppic (40>R>0)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 8.17
 + Arid -steppic- (15>Ia>5)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 19.51
 + Arid (30>Q>0)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 8.26
 + Extremely arid (DR>6)
 Aridity Index of UNEP [I=P/PE]: 0.23
 + Semiarid (0.5>Im>0.2)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 7.42
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 1. Termoeremic (Desertic warm)
 + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.13	0.10	0.09	0.03	0.06	0.05	0.03	0.03	0.02	0.06	0.10	0.12
T-E ratio	12.87	12.50	11.12	8.87	6.88	5.50	5.25	6.50	8.25	10.25	11.63	12.50
Precipitation-effectiveness: 8.24						Temperature-efficiency: 112.13						
Moisture Index [MI=100*(P-PE)/PE]: -76.90 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]: 76.90 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 1088.32 + Forth mesothermic (997<PE<1440)												

