

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

BIRDSVILLE (AUSTRALIA)

Altitude: 47 m.

Latitude: 25°54'S Longitude: 139°21'E

Temperature observation period.: 1954-1990 (37)

Rainfall observation period....: 1892-1990 (99)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	31.20	38.64	24.01	0.00	0.00	26.6	202.55
Feb.	30.67	36.36	24.99	0.00	0.00	27.5	170.57
Mar.	27.86	33.51	22.14	0.00	0.00	18.8	153.71
Apr.	23.08	28.90	17.20	0.00	0.00	9.6	88.40
May.	17.96	24.23	11.88	0.00	0.00	11.7	42.77
Jun.	14.53	20.11	8.74	0.00	0.00	10.5	22.07
Jul.	13.43	19.73	7.38	0.00	0.00	11.3	18.49
Aug.	15.49	21.63	9.28	0.00	0.00	6.5	29.12
Sep.	19.66	26.99	12.36	0.00	0.00	6.0	58.67
Oct.	23.94	30.45	17.45	0.00	0.00	11.7	113.29
Nov.	27.29	30.55	24.05	0.00	0.00	12.5	158.84
Dec.	29.88	35.61	24.24	0.00	0.00	16.2	193.44
Year	22.92	28.89	16.98	0.00	0.00	169	1251.9

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	500
Compensated thermicity index.....(Itc):	500
Simple continentality index.....(Ic):	17.8
Diurnality index.....(Id):	14.6
Annual ombrothermic index.....(Io):	0.61
Monthly dry ombrothermic index.....(Iod1):	0.31
Bimonthly dry ombrothermic index.....(Iod2):	0.36
Three monthly dry ombrothermic index.....(Iod3):	0.49
Four monthly dry ombrothermic index.....(Iod4):	0.54
Annual ombro-evaporation index.....(Ioe):	2.04
Annual positive temperature.....(Tp):	2750
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	486
Positive precipitation.....(Pp):	169

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	0	12	0

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - Low Semicontinental

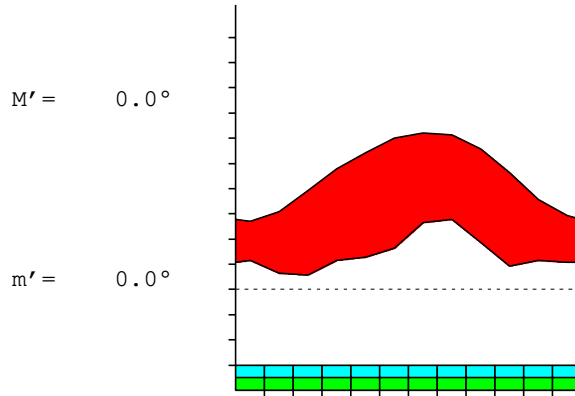
Bioclimate(Variant): TROPICAL DESERTIC (ARID)

Bioclimatic Belt...: UPPER THERMOTROPICAL LOW ARID

BIRDSVILLE (AUSTRALIA)

47 m

P= 169 25° 54'S 139° 21'E 37/99 y.  
 T= 22.9° Ic= 17.8 Tp= 2750 Tn= 0  
 m= 7.4° M= 19.7° Itc= 500 Io= 0.6



TROPICAL DESERTIC (ARID)  
 UPPER THERMOTROPICAL LOW ARID

WATER INDEX CARD BIRDSVILLE (AUSTRALIA)  
 Altitude: 47 m. Latitude: 25° 54'S

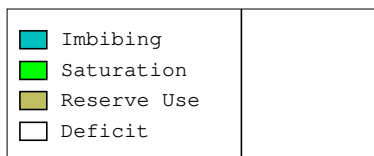
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	13.4	18	11	0	0	11	7	0	0	-0.3
Aug.	15.5	29	7	0	0	7	23	0	0	-0.7
Sep.	19.7	59	6	0	0	6	53	0	0	-0.8
Oct.	23.9	113	12	0	0	12	102	0	0	-0.8
Nov.	27.3	159	13	0	0	13	146	0	0	-0.9
Dec.	29.9	193	16	0	0	16	177	0	0	-0.9
Jan.	31.2	203	27	0	0	27	176	0	0	-0.8
Feb.	30.7	171	28	0	0	28	143	0	0	-0.8
Mar.	27.9	154	19	0	0	19	135	0	0	-0.8
Apr.	23.1	88	10	0	0	10	79	0	0	-0.8
May.	18.0	43	12	0	0	12	31	0	0	-0.7
Jun.	14.5	22	11	0	0	11	12	0	0	-0.5
Year	22.9	1252	169	*	*	169	1083	0	0	*

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

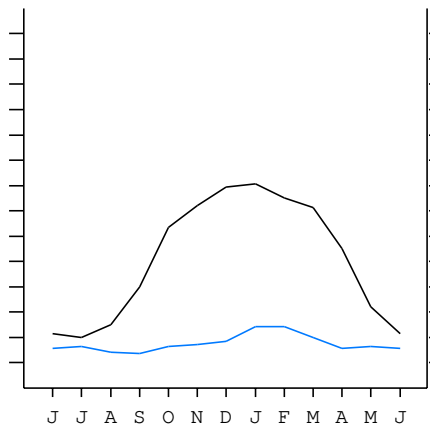
BIRDSVILLE (AUSTRALIA)

25°54'S 139°21'E 47 m 37/99 y.

T= 22.9 Ic= 17.8 TROPICAL DESERTIC (ARID)  
 m= 7.4 Tp= 2750 UPPER THERMOTROPICAL  
 M= 19.7 Tn= 0 LOW ARID  
 M' = 0.0 Itc= 500  
 m' = 0.0 Io= 0.6  
 P= 169 mm  
 PE= 1252 mm



All over the year,  
 there is hydric deficit



BIRDSVILLE (AUSTRALIA)

Latitude: 25°54'S Longitude: 139°21'E Altitude: 47 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1a]  
 + Type .....: B. Oceanic  
 + Subtype .....: 1. Semicontinental  
 + Variant .....: a. Low  
 Thermic types [A3.A2]  
 + Latitudinal zone ....: A. Warm  
 + Latitudinal belt ....: 3. Subtropical  
 + Thermic type .....: A. Warm  
 + Thermic subtype .....: 2. Warm  
 Bioclimatic types [A2.2a.3b]  
 + Macrobioclimate .....: A. TROPICAL  
 + Bioclimate .....: 2. DESERTIC  
 + Bioclimatic variant ..:  
 + Thermic type.....: 2. THERMOTROPICAL  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 3. ARID  
 + Ombrothermic subtype : b. LOW  
 Bioclimatic Classification .....: Trps.Ttr.Ari

BIRDSVILLE (AUSTRALIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 113  
 Coldest semester of the year.....(Psw): 56  
 Warmest four months period of the year.....(Pcm1): 89  
 Following warmest four months period.....(Pcm2): 43  
 Positive precipitation dryest 3 months.....(Ppd): 24  
 Positive precipitation dryest 2 months.....(Ppd2): 13  
 Positive precipitation dryest 1 month.....(Ppd1): 6  
 Positive precipitation warmest 3 months.....(Pps): 70  
 Positive precipitation warmest 2 months.....(Pps2): 54  
 Positive precipitation warmest 1 month.....(Pps1): 27  
 Positive precipitation coldest 3 months.....(Ppw): 28  
 Positive precipitation coldest 2 months.....(Ppw2): 22  
 Positive precipitation coldest 1 month.....(Ppw1): 11

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	28	30	70	40

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.2  
 Average coldest month [T].....(Tmin): 13.4  
 Maximum temp. warmest month [M].....(Tmmax): 38.6  
 Minimum temp. coldest month [m].....(Tmmin): 7.4  
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0  
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0  
 First warmest contrasted month [M].....(Tcmax): 38.6 (1)  
 First coldest contrasted month [m].....(Tcmin): 24.0 (1)  
 Dry station temperature.....(Td): 486  
 Positive temperature dryest 3 months.....(Tpd): 486  
 Positive temperature dryest 2 months.....(Tpd2): 352  
 Positive temperature dryest 1 month.....(Tpd1): 197  
 Positive temperature warmest 3 months.....(Tps): 918  
 Positive temperature warmest 2 months.....(Tps2): 619  
 Positive temperature warmest 1 month.....(Tps1): 312  
 Positive temperature coldest 3 months.....(Tpw): 435  
 Positive temperature coldest 2 months.....(Tpw2): 280  
 Positive temperature coldest 1 month.....(Tpw1): 134

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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

BIRDSVILLE (AUSTRALIA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 7.41  
 Mediterranean index of January.....(Im1): 7.60  
 Mediterranean index of January & February.....(Im2): 6.88  
 Mediterranean index of December to February...(Im3): 8.05

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	162	267	276	188	96	117	105	113	65	60	117	125
Tp	299	312	307	279	231	180	145	134	155	197	239	273
Io (Iom)	0.54	0.85	0.90	0.67	0.42	0.65	0.73	0.84	0.42	0.31	0.49	0.46
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	704 / 918			400 / 689			283 / 435			302 / 709		
Io (Iot)	0.767			0.581			0.652			0.427		
Semesters	December-May						June-November					
Pp(x10)/Tp	1104 / 1607						586 / 1143					
Io (Iosm)	0.687						0.512					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 1690/2750=0.61 Weak lower arid (6) [1673]

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	162	267	276	188	96	117	105	113	65	60	117	125
Tp [T*10]	299	312	307	279	231	180	145	134	155	197	239	273
Iom [Pp/Tp]	54	85	90	67	42	65	73	84	42	31	49	46
Avm [200-Iom]	146	115	110	133	158	135	127	116	158	169	151	154
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	704 / 918			400 / 689			283 / 435			302 / 709		
Iot [Pp/Tp]	77			58			65			43		
Avs E[Avm<200]	371			426			401			475		
Upper hyperarid [1]						Strong lower arid [5]						
Weak lower arid [5]						Strong upper arid [2]						
Weak upper arid [3]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 17.77  
 CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 48.76  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 37.52  
 + Oceanic (20<CI<40)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 1.84  
 + Continental (1.7<CI<2.3)  
 Rainfall Index of Lang (1925) [R=P/T] .....: 7.37  
 + Steppic (40>R>0)  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 5.13  
 + Arid -steppic- (15>Ia>5)  
 I of Emberger (1930) [Q=100\*P/(Tmax<sup>2</sup>-Tmin<sup>2</sup>)] .....: 11.74  
 + Arid (30>Q>0)  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: 13.56  
 + Extremely arid (DR>6)  
 Aridity Index of UNEP [I=P/PE] .....: 0.13  
 + Arid (0.2>Im>0.05)  
 Potential Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 4.49  
 + 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	0.07	0.08	0.05	0.03	0.04	0.04	0.04	0.02	0.02	0.03	0.03	0.04
T-E ratio	14.04	13.80	12.54	10.39	8.08	6.54	6.04	6.97	8.85	10.77	12.28	13.45
Precipitation-effectiveness: 5.14						Temperature-efficiency .....: 123.75						
Moisture Index [MI=100*(P-PE)/PE] .....: -86.50 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE] .....: 86.50 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE .....: 1251.90 + Forth mesothermic (997<PE<1440)												

