

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

TAMWORTH (AUSTRALIA)

Altitude: 405 m.

Latitude: 31°5'S Longitude: 150°50'E

Temperature observation period.: 1963-1994 (32)

Rainfall observation period....: 1944-1994 (51)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	25.00	32.78	17.22	45.00	5.00	71.1	145.13
Feb.	24.72	32.22	17.22	41.67	7.22	67.1	122.02
Mar.	21.94	29.44	14.44	39.44	2.22	54.1	100.86
Apr.	17.50	25.00	10.00	34.44	-1.11	45.0	59.67
May.	13.34	20.56	6.11	30.56	-5.56	40.1	34.72
Jun.	10.28	16.67	3.89	28.89	-6.67	57.9	20.09
Jul.	9.17	15.56	2.78	25.56	-5.56	46.0	17.25
Aug.	10.56	17.78	3.33	30.56	-5.56	46.0	23.84
Sep.	13.89	22.22	5.56	33.89	-3.89	51.1	41.09
Oct.	18.06	26.11	10.00	37.22	-3.33	53.1	74.54
Nov.	21.39	29.44	13.33	41.67	2.22	68.1	103.53
Dec.	23.89	31.67	16.11	43.33	2.22	72.1	134.62
Year	17.48	24.95	10.00	36.02	-1.07	672	877.36

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	358
Compensated thermicity index.....(Itc):	358
Simple continentality index.....(Ic):	15.8
Diurnality index.....(Id):	16.7
Annual ombrothermic index.....(Io):	3.20
Monthly estival ombrothermic index.....(Ios1):	2.71
Bimonthly estival ombrothermic index.....(Ios2):	2.78
Threemonthly estival ombrothermic index.....(Ios3):	2.86
Fourmonthly estival ombrothermic index.....(Ios4):	2.93
Annual ombro-evaporation index.....(Ioe):	0.77
Annual positive temperature.....(Tp):	2097
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	736
Positive precipitation.....(Pp):	672

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	3	9	0	0	0

Latitudinal Belt...: Subtropical

Continentality.....: Oceanic - Low Euoceanic

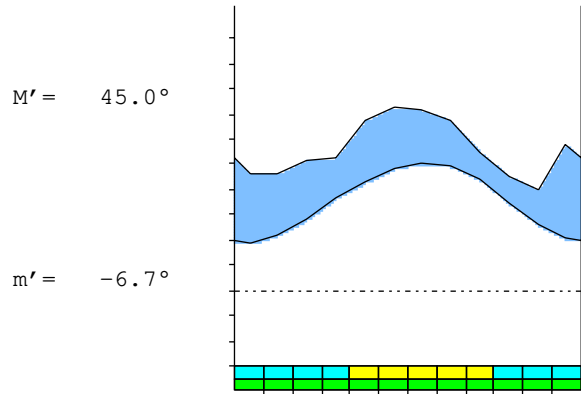
Bioclimate(Variant): TEMPERATE XERIC (SUBMEDITERRANEAN)

Bioclimatic Belt...: LOW THERMOTEMPERATE UPPER DRY

TAMWORTH (AUSTRALIA)

405 m

P= 672      31° 5'S      150° 50'E      32/51 y.  
 T= 17.5 °    Ic= 15.8      Tp= 2097      Tn= 0  
 m= 2.8 °      M= 15.6 °      Itc= 358      Io= 3.2



TEMPERATE XERIC (SUBMEDITERRANEAN)  
 LOW THERMOTEMPERATE UPPER DRY

WATER INDEX CARD      TAMWORTH (AUSTRALIA)  
 Altitude: 405 m.      Latitude: 31° 5'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	9.2	17	46	29	72	17	0	0	0	1.6
Aug.	10.6	24	46	22	94	24	0	0	0	0.9
Sep.	13.9	41	51	6	100	41	0	4	2	0.2
Oct.	18.1	75	53	-21	79	75	0	0	1	-0.2
Nov.	21.4	104	68	-35	43	104	0	0	1	-0.3
Dec.	23.9	135	72	-43	0	115	19	0	0	-0.4
Jan.	25.0	145	71	0	0	71	74	0	0	-0.5
Feb.	24.7	122	67	0	0	67	55	0	0	-0.4
Mar.	21.9	101	54	0	0	54	47	0	0	-0.4
Apr.	17.5	60	45	0	0	45	15	0	0	-0.2
May.	13.3	35	40	5	5	35	0	0	0	0.1
Jun.	10.3	20	58	38	43	20	0	0	0	1.8
Year	17.5	877	672	*	*	668	210	4	4	*

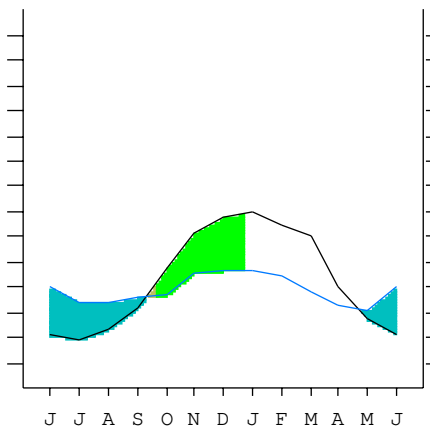
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

TAMWORTH (AUSTRALIA)

31°5'S 150°50'E      405 m 32/51 y.

T= 17.5    Ic= 15.8      TEMPERATE XERIC (SUBMEDITERRANEAN)  
 m= 2.8    Tp= 2097      LOW THERMOTEMPERATE  
 M= 15.6    Tn= 0            UPPER DRY  
 M' = 45.0    Itc= 358  
 m' = -6.7    Io= 3.2  
 P= 672      mm ———  
 PE= 877     mm ———

Imbibing	22 Apr.
Saturation	18 Sep.
Reserve Use	10 Sep.
Deficit	21 Dec.



TAMWORTH (AUSTRALIA)

Latitude: 31°5'S Longitude: 150°50'E Altitude: 405 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [B2b]  
 + Type .....: B. Oceanic  
 + Subtype .....: 2. Euoceanic  
 + 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 [C1b.2b.5a]  
 + Macrobioclimate .....: C. TEMPERATE  
 + Bioclimate .....: 1. XERIC  
 + Bioclimatic variant .: SUBMEDITERRANEAN  
 + Thermic type.....: 2. THERMOTEMPERATE  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 5. DRY  
 + Ombrothermic subtype : a. UPPER  
 Bioclimatic Classification .....Texe (Sbm).Tte.Dry.Euo

TAMWORTH (AUSTRALIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 386  
 Coldest semester of the year.....(Psw): 286  
 Warmest four months period of the year.....(Pcm1): 264  
 Following warmest four months period.....(Pcm2): 189  
 Positive precipitation dryest 3 months.....(Ppd): 139  
 Positive precipitation dryest 2 months.....(Ppd2): 85  
 Positive precipitation dryest 1 month.....(Ppd1): 40  
 Positive precipitation warmest 3 months.....(Pps): 210  
 Positive precipitation warmest 2 months.....(Pps2): 138  
 Positive precipitation warmest 1 month.....(Pps1): 71  
 Positive precipitation coldest 3 months.....(Ppw): 150  
 Positive precipitation coldest 2 months.....(Ppw2): 104  
 Positive precipitation coldest 1 month.....(Ppw1): 46

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	149	172	210	139

Seasonal rainfall rhythms: S > P > W > F

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.0  
 Average coldest month [T].....(Tmin): 9.2  
 Maximum temp. warmest month [M].....(Tmax): 32.8  
 Minimum temp. coldest month [m].....(Tmin): 2.8  
 Absolute Max.temp. warmest month [M'].....(Tamax): 45.0  
 Absolute Min.temp. coldest month [m'].....(Tamin): -6.7  
 First warmest contrasted month [M].....(Tcmax): 22.2 (9)  
 First coldest contrasted month [m].....(Tcmin): 5.6 (9)  
 Estival temperature.....(Ts): 736  
 Positive temperature dryest 3 months.....(Tpd): 528  
 Positive temperature dryest 2 months.....(Tpd2): 308  
 Positive temperature dryest 1 month.....(Tpd1): 133  
 Positive temperature warmest 3 months.....(Tps): 736  
 Positive temperature warmest 2 months.....(Tps2): 497  
 Positive temperature warmest 1 month.....(Tps1): 250  
 Positive temperature coldest 3 months.....(Tpw): 300  
 Positive temperature coldest 2 months.....(Tpw2): 195  
 Positive temperature coldest 1 month.....(Tpw1): 92

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.31  
 Mediterranean index of January.....(Im1): 2.04  
 Mediterranean index of January & February....(Im2): 1.93  
 Mediterranean index of December to February...(Im3): 1.91

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	721	711	671	541	450	401	579	460	460	511	531	681
Tp	239	250	247	219	175	133	103	92	106	139	181	214
Io (Iom)	3.02	2.84	2.71	2.47	2.57	3.01	5.63	5.02	4.36	3.68	2.94	3.18
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	2103 / 736			1392 / 528			1499 / 300			1723 / 533		
Io (Iot)	2.857			2.637			4.995			3.230		
Semesters	December-May						June-November					
Pp(x10)/Tp	3495 / 1264						3222 / 834					
Io (Iosm)	2.765						3.866					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 6717/2097=3.20 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	721	711	671	541	450	401	579	460	460	511	531	681
TP [T*10]	239	250	247	219	175	133	103	92	106	139	181	214
Iom [Pp/TP]	302	284	271	247	257	301	563	502	436	368	294	318
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	2103 / 736			1392 / 528			1499 / 300			1723 / 533		
Iot [Pp/TP]	286			264			500			323		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp): 15.83
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....	31.72
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....	26.95
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....	1.39
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T] .....	38.43
+ Steppic (40>R>0)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....	24.44
+ Subhumid (30>Ia>20)	
I of Emberger (1930) [Q=100*P/(Tmmax <sup>2</sup> -Tmmin <sup>2</sup> )] .....	62.96
+ Subhumid (90>Q>50)	
I of Dantin & Revenga (1940) [DR=100*T/P] .....	2.60
+ Semiarid (3>DR>2)	
Aridity Index of UNEP [I=P/PE] .....	0.77
+ Humid (I>0.65)	
Potencial Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P].....	7.74
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate ..... A. Warm and temperate warm  
 + Region ..... 7. Mesoaxeric (Axeric temperate)  
 + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.25	0.24	0.20	0.18	0.18	0.30	0.24	0.23	0.23	0.22	0.26	0.26
T-E ratio	11.25	11.12	9.87	7.88	6.00	4.63	4.13	4.75	6.25	8.13	9.63	10.75
Precipitation-effectiveness: 28.07						Temperature-efficiency .....: 94.38						
Moisture Index [MI=100*(P-PE)/PE] .....												
+ C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE] .....												
+ Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE] .....												
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE .....												
+ Third mesothermic (855<PE<997)												

