

# Phytosociological Research Center

www.globalbioclimatics.org

## Worldwide Bioclimatic Classification System

S.Rivas-Martinez(+) & S.Rivas-Saenz

(Adapted to Synoptical Table 14/02/2020)

KING ISLAND (AUSTRALIA)

Altitude: 40 m.

Latitude: 39°53'S Longitude: 143°54'E

Temperature observation period.: 1970-1994 (25)

Rainfall observation period....: 1961-1994 (34)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	16.11	20.00	12.22	35.56	3.33	38.1	88.86
Feb.	16.67	20.56	12.78	35.00	1.67	38.1	78.33
Mar.	15.83	19.44	12.22	34.44	1.67	43.2	73.15
Apr.	14.17	17.22	11.11	28.89	1.11	61.0	54.90
May.	12.22	15.00	9.44	22.22	1.11	88.9	41.74
Jun.	10.83	13.33	8.33	19.44	-1.11	101.6	32.26
Jul.	10.28	12.78	7.78	19.44	-1.11	114.3	32.43
Aug.	10.56	13.33	7.78	20.00	0.00	109.2	36.80
Sep.	11.39	14.44	8.33	26.11	0.00	88.9	44.22
Oct.	12.23	15.56	8.89	29.44	-0.56	68.6	55.87
Nov.	13.33	17.22	9.44	33.33	0.00	50.8	65.34
Dec.	15.00	18.89	11.11	35.00	1.11	55.9	82.12
Year	13.22	16.48	9.95	28.24	0.60	859	686.00

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	338
Compensated thermicity index.....(Itc):	322
Simple continentality index.....(Ic):	6.4
Diurnality index.....(Id):	7.8
Annual ombrothermic index.....(Io):	5.41
Monthly estival ombrothermic index.....(Ios1):	2.29
Bimonthly estival ombrothermic index.....(Ios2):	2.32
Threemonthly estival ombrothermic index.....(Ios3):	2.76
Fourmonthly estival ombrothermic index.....(Ios4):	2.99
Annual ombro-evaporation index.....(Ioe):	1.25
Annual positive temperature.....(Tp):	1586
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	478
Positive precipitation.....(Pp):	859

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	7	5	0	0	0

Latitudinal Belt...: Low Eutemperate

Continentality.....: Hyperoceanic - Low Euhyperoceanic

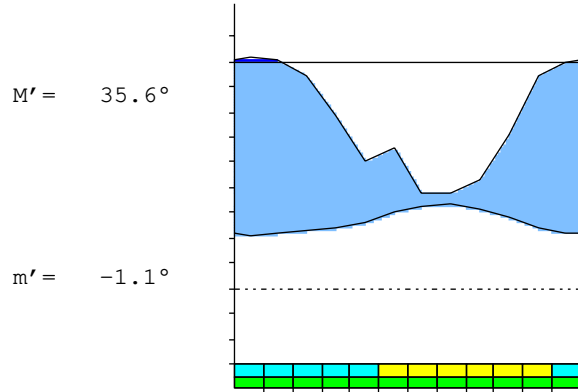
Bioclimate(Variant): TEMPERATE HYPEROCEANIC (SUBMEDITERRANEAN)

Bioclimatic Belt...: UPPER THERMOTEMPERATE UPPER SUBHUMID

KING ISLAND (AUSTRALIA)

40 m

P= 859 39° 53'S 143° 54'E 25/34 y.  
 T= 13.2 ° Ic= 6.4 Tp= 1586 Tn= 0  
 m= 7.8 ° M= 12.8 ° Itc= 322 Io= 5.4



TEMPERATE HYPEROCEANIC (SUBMEDITERRANEAN)  
 UPPER THERMOTEMPERATE UPPER SUBHUMID

WATER INDEX CARD

KING ISLAND (AUSTRALIA)

Altitude: 40 m.

Latitude: 39° 53'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	10.3	32	114	0	100	32	0	82	47	2.5
Aug.	10.6	37	109	0	100	37	0	72	60	1.9
Sep.	11.4	44	89	0	100	44	0	45	52	1.0
Oct.	12.2	56	69	0	100	56	0	13	32	0.2
Nov.	13.3	65	51	-15	85	65	0	0	16	-0.2
Dec.	15.0	82	56	-26	59	82	0	0	8	-0.3
Jan.	16.1	89	38	-51	8	89	0	0	4	-0.5
Feb.	16.7	78	38	-8	0	47	32	0	2	-0.5
Mar.	15.8	73	43	0	0	43	30	0	1	-0.4
Apr.	14.2	55	61	6	6	55	0	0	1	0.1
May.	12.2	42	89	47	53	42	0	0	0	1.1
Jun.	10.8	32	102	47	100	32	0	23	11	2.1
Year	13.2	686	859	*	*	624	62	234	234	*

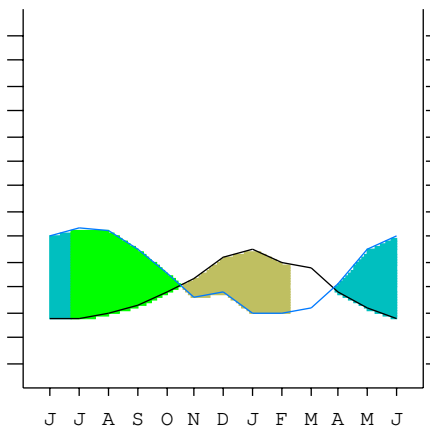
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration  
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

KING ISLAND (AUSTRALIA)

39°53'S 143°54'E 40 m 25/34 y.

T= 13.2 Ic= 6.4 TEMPERATE HYPEROCEANIC (SUBMEDITERRANEAN)  
 m= 7.8 Tp= 1586 UPPER THERMOTEMPERATE  
 M= 12.8 Tn= 0 UPPER SUBHUMID  
 M' = 35.6 Itc= 322  
 m' = -1.1 Io= 5.4  
 P= 859 mm  
 PE= 686 mm

Imbibing	25 Mar.
Saturation	21 Jun.
Reserve Use	15 Oct.
Deficit	7 Feb.



KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A2b]  
 + Type .....: A. Hyperoceanic  
 + Subtype .....: 2. Euhyperoceanic  
 + Variant .....: b. Low  
 Thermic types [B1.B4]  
 + Latitudinal zone ....: B. Temperate  
 + Latitudinal belt ....: 1. Low Eutemperate  
 + Thermic type .....: B. Temperate  
 + Thermic subtype .....: 4. Temperate  
 Bioclimatic types [C4b.2a.6a]  
 + Macrobioclimate .....: C. TEMPERATE  
 + Bioclimate .....: 4. HYPEROCEANIC  
 + Bioclimatic variant .: SUBMEDITERRANEAN  
 + Thermic type.....: 2. THERMOTEMPERATE  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : a. UPPER  
 Bioclimatic Classification .....Teho (Sbm) .Tte.Shu.Eho

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 287  
 Coldest semester of the year.....(Psw): 572  
 Warmest four months period of the year.....(Pcm1): 175  
 Following warmest four months period.....(Pcm2): 366  
 Positive precipitation dryest 3 months.....(Ppd): 119  
 Positive precipitation dryest 2 months.....(Ppd2): 76  
 Positive precipitation dryest 1 month.....(Ppd1): 38  
 Positive precipitation warmest 3 months.....(Pps): 119  
 Positive precipitation warmest 2 months.....(Pps2): 76  
 Positive precipitation warmest 1 month.....(Pps1): 38  
 Positive precipitation coldest 3 months.....(Ppw): 325  
 Positive precipitation coldest 2 months.....(Ppw2): 224  
 Positive precipitation coldest 1 month.....(Ppw1): 114

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	325	208	132	193

Seasonal rainfall rhythms: W > P > F > S

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 16.7  
 Average coldest month [T].....(Tmin): 10.3  
 Maximum temp. warmest month [M].....(Tmax): 20.6  
 Minimum temp. coldest month [m].....(Tmin): 7.8  
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.6  
 Absolute Min.temp. coldest month [m'].....(Tamin): -1.1  
 First warmest contrasted month [M].....(Tcmax): 20.0 (1)  
 First coldest contrasted month [m].....(Tcmin): 12.2 (1)  
 Estival temperature.....(Ts): 478  
 Positive temperature dryest 3 months.....(Tpd): 486  
 Positive temperature dryest 2 months.....(Tpd2): 328  
 Positive temperature dryest 1 month.....(Tpd1): 161  
 Positive temperature warmest 3 months.....(Tps): 486  
 Positive temperature warmest 2 months.....(Tps2): 328  
 Positive temperature warmest 1 month.....(Tps1): 167  
 Positive temperature coldest 3 months.....(Tpw): 317  
 Positive temperature coldest 2 months.....(Tpw2): 208  
 Positive temperature coldest 1 month.....(Tpw1): 103

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

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

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.80  
 Mediterranean index of January.....(Im1): 2.33  
 Mediterranean index of January & February....(Im2): 2.19  
 Mediterranean index of December to February...(Im3): 1.89

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	559	381	381	432	610	889	1016	1143	1092	889	686	508
Tp	150	161	167	158	142	122	108	103	106	114	122	133
Io (Iom)	3.73	2.36	2.29	2.73	4.30	7.27	9.38	11.1	10.3	7.81	5.61	3.81
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	1321 / 478			1931 / 422			3251 / 317			2083 / 370		
Io (Iot)	2.765			4.574			10.27			5.637		
Semesters	December-May						June-November					
Pp(x10)/Tp	3252 / 900						5334 / 686					
Io (Iosm)	3.613						7.773					

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 8586/1586=5.41 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	559	381	381	432	610	889	1016	1143	1092	889	686	508
Tp [T*10]	150	161	167	158	142	122	108	103	106	114	122	133
Iom [Pp/Tp]	373	236	229	273	430	727	938	\$\$	\$\$	781	561	381
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	1321 / 478			1931 / 422			3251 / 317			2083 / 370		
Iot [Pp/Tp]	276			457			1027			564		
Avs E [Avm<200]	***			***			***			***		

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp):	6.39
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....		-3.46
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....		0.20
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....		0.45
+ Hyperoceanic (0<CI<0.6)		
Rainfall Index of Lang (1925) [R=P/T] .....		64.96
+ Temperate warm (100>R>60)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....		36.98
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmmax <sup>2</sup> -Tmmin <sup>2</sup> )] .....		237.06
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P] .....		1.54
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE] .....		1.25
+ Humid (I>0.65)		
Potencial Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P].....		15.22
+ Very low (K<60)		

KING ISLAND (AUSTRALIA)

Latitude: 39°53'S Longitude: 143°54'E Altitude: 40 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....: A. Warm and temperate warm  
 + Region .....: 7. Mesoaxeric (Axeric temperate)  
 + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.16	0.16	0.18	0.28	0.46	0.55	0.64	0.60	0.47	0.34	0.24	0.25
T-E ratio	7.25	7.50	7.12	6.38	5.50	4.87	4.63	4.75	5.13	5.50	6.00	6.75
Precipitation-effectiveness: 43.27						Temperature-efficiency .....: 71.38						
Moisture Index [MI=100*(P-PE)/PE] .....												
+ B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE] .....												
+ No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE] .....												
+ Strong surplus (20<HI)												
Potential Evapotranspiration PE .....												
+ First mesothermic (570<PE<712)												

