

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

PAULISTANA (BRAZIL)

Altitude: 374 m.

Latitude: 8°8'S Longitude: 71°8'W

Temperature observation period.: 1976-1990 (15)

Rainfall observation period....: 1976-1990 (15)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	26.30	31.40	23.40	37.70	17.00	95.0	138.52
Feb.	25.70	31.20	21.80	37.60	18.50	117.0	114.03
Mar.	25.50	30.50	22.00	38.10	17.00	149.0	121.15
Apr.	25.60	30.80	22.20	37.70	17.40	58.0	115.90
May.	26.10	33.40	22.30	37.50	15.30	12.0	127.08
Jun.	26.00	31.00	21.40	36.00	16.00	2.0	120.32
Jul.	25.10	30.90	21.10	35.70	15.00	2.0	109.86
Aug.	24.80	30.20	20.10	36.90	16.70	0.0	106.09
Sep.	28.20	33.90	23.50	37.70	16.90	5.0	149.11
Oct.	28.90	34.50	24.70	38.70	18.70	16.0	163.99
Nov.	28.50	34.30	25.00	39.80	19.10	45.0	157.57
Dec.	27.40	32.50	23.60	38.30	17.30	96.0	155.55
Year	26.51	32.05	22.59	37.64	17.08	597	1579.2

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	768
Compensated thermicity index.....(Itc):	768
Simple continentality index.....(Ic):	4.1
Diurnality index.....(Id):	11.1
Annual ombrothermic index.....(Io):	1.88
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	0.04
Three monthly dry ombrothermic index.....(Iod3):	0.05
Four monthly dry ombrothermic index.....(Iod4):	0.16
Annual ombro-evaporation index.....(Ioe):	1.68
Annual positive temperature.....(Tp):	3181
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	759
Positive precipitation.....(Pp):	597

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	2	3	1	6	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Euhyperoceanic

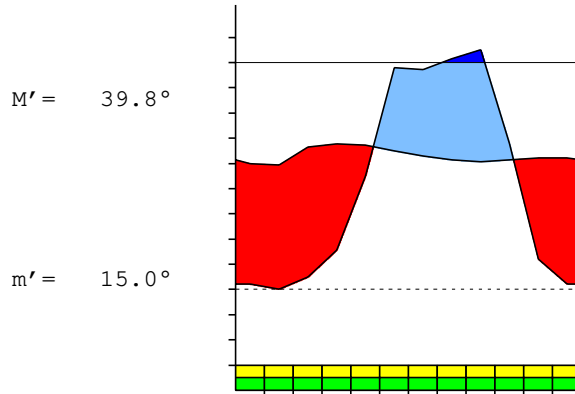
Bioclimate(Variant): TROPICAL XERIC (PLUVISEROTIN, SEMIARID)

Bioclimatic Belt...: UPPER INFRATROPICAL UPPER SEMIARID

PAULISTANA (BRAZIL)

374 m

P= 597 8° 8'S 71° 8'W 15/15 y.
 T= 26.5° Ic= 4.1 Tp= 3181 Tn= 0
 m= 20.1° M= 30.2° Itc= 768 Io= 1.9



TROPICAL XERIC (PLUVISEROTIN)
 UPPER INFRATROPICAL UPPER SEMIARID

WATER INDEX CARD PAULISTANA (BRAZIL)
 Altitude: 374 m. Latitude: 8° 8'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	25.1	110	2	0	0	2	108	0	0	-0.9
Aug.	24.8	106	0	0	0	0	106	0	0	-1.0
Sep.	28.2	149	5	0	0	5	144	0	0	-0.9
Oct.	28.9	164	16	0	0	16	148	0	0	-0.9
Nov.	28.5	158	45	0	0	45	113	0	0	-0.7
Dec.	27.4	156	96	0	0	96	60	0	0	-0.3
Jan.	26.3	139	95	0	0	95	44	0	0	-0.3
Feb.	25.7	114	117	3	3	114	0	0	0	0.0
Mar.	25.5	121	149	28	31	121	0	0	0	0.2
Apr.	25.6	116	58	-31	0	89	27	0	0	-0.4
May.	26.1	127	12	0	0	12	115	0	0	-0.9
Jun.	26.0	120	2	0	0	2	118	0	0	-0.9
Year	26.5	1579	597	*	*	597	982	0	0	*

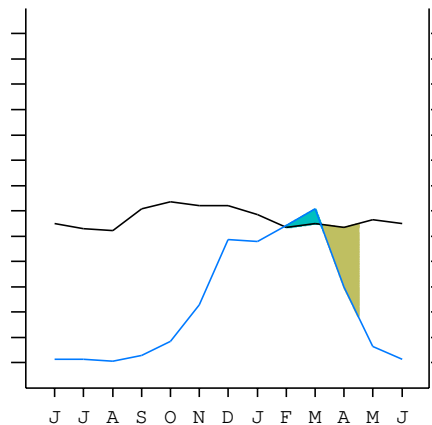
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

PAULISTANA (BRAZIL)

8°8'S 71°8'W 374 m 15/15 y.

T= 26.5 Ic= 4.1 TROPICAL XERIC (PLUVISEROTIN)
 m= 20.1 Tp= 3181 UPPER INFRATROPICAL
 M= 30.2 Tn= 0 UPPER SEMIARID
 M' = 39.8 Itc= 768
 m' = 15.0 Io= 1.9
 P= 597 mm ———
 PE= 1579 mm ———

Imbibing	29 Jan.
Saturation	10 Mar.
Reserve Use	16 Apr.
Deficit	



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2a]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: a. High

Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid

Bioclimatic types [A3e.1a.4a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .: e. PLUVISEROTIN, SEMIARID
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification: Trxe(Pse).Itr.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 374
 Coldest semester of the year.....(Psw): 223
 Warmest four months period of the year.....(Pcm1): 162
 Following warmest four months period.....(Pcm2): 419
 Positive precipitation dryest 3 months.....(Ppd): 4
 Positive precipitation dryest 2 months.....(Ppd2): 2
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 66
 Positive precipitation warmest 2 months.....(Pps2): 61
 Positive precipitation warmest 1 month.....(Pps1): 16
 Positive precipitation coldest 3 months.....(Ppw): 4
 Positive precipitation coldest 2 months.....(Ppw2): 2
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	4	66	308	219

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 28.9
 Average coldest month [T].....(Tmin): 24.8
 Maximum temp. warmest month [M].....(Tmmax): 34.5
 Minimum temp. coldest month [m].....(Tmmin): 20.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 39.8
 Absolute Min.temp. coldest month [m'].....(Tamin): 15.0
 First warmest contrasted month [M].....(Tcmax): 33.4 (5)
 First coldest contrasted month [m].....(Tcmin): 22.3 (5)
 Dry station temperature.....(Td): 759
 Positive temperature dryest 3 months.....(Tpd): 759
 Positive temperature dryest 2 months.....(Tpd2): 499
 Positive temperature dryest 1 month.....(Tpd1): 248
 Positive temperature warmest 3 months.....(Tps): 856
 Positive temperature warmest 2 months.....(Tps2): 574
 Positive temperature warmest 1 month.....(Tps1): 289
 Positive temperature coldest 3 months.....(Tpw): 759
 Positive temperature coldest 2 months.....(Tpw2): 499
 Positive temperature coldest 1 month.....(Tpw1): 248

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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)	o	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	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 2.65
 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)	960	950	1170	1490	580	120	20	20	0	50	160	450
Tp	274	263	257	255	256	261	260	251	248	282	289	285
Io (Iom)	3.50	3.61	4.55	5.84	2.27	0.46	0.08	0.08	0.00	0.18	0.55	1.58
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	3080 / 794			2190 / 772			40 / 759			660 / 856		
Io (Iot)	3.879			2.837			0.053			0.771		
Semesters	December-May						June-November					
Pp(x10)/Tp	5270 / 1566						700 / 1615					
Io (Iosm)	3.365						0.433					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 5970/3181=1.88 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	960	950	1170	1490	580	120	20	20	0	50	160	450
Tp [T*10]	274	263	257	255	256	261	260	251	248	282	289	285
Iom [Pp/Tp]	350	361	455	584	227	46	8	8	0	18	55	158
Avm [200-Iom]	***	***	***	***	***	154	192	192	200	182	145	42
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	3080 / 794			2190 / 772			40 / 759			660 / 856		
Iot [Pp/Tp]	388			284			5			77		
Avs E[Avm<200]	***			***			584			369		
Lower ultrahyperarid [4]						Upper ultrahyperarid [1]						
Strong lower arid [1]						Weak lower arid [1]						
Strong upper arid [1]						Strong upper semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	4.10
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		28.87
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		8.40
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.10
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		22.52
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		16.35
+ Semiarid -mediterranean- (20>Ia>15)		
I of Emberger (1930) [Q=100*P/(Tmmax ² -Tmmin ²)]		75.93
+ Subhumid (90>Q>50)		
I of Dantin & Revenga (1940) [DR=100*T/P]		4.44
+ Arid (6>DR>3)		
Aridity Index of UNEP [I=P/PE]		0.38
+ Semiarid (0.5>Im>0.2)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		37.19
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.34	0.43	0.57	0.20	0.03	0.00	0.00	0.00	0.01	0.04	0.14	0.33
T-E ratio	11.83	11.57	11.48	11.52	11.75	11.70	11.30	11.16	12.69	13.00	12.82	12.33
Precipitation-effectiveness: 21.12						Temperature-efficiency						143.15
Moisture Index [MI=100*(P-PE)/PE]												-62.20
+ D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]												62.19
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												1579.16
+ Megathermic (PE>1440)												

