

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SAN JUAN YAPACANI (BOLIVIA)

Altitude: 277 m.

Latitude: 17°17'S Longitude: 63°50'W

Temperature observation period.: 1960-1979 (20)

Rainfall observation period....: 1959-1979 (21)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	26.40	31.10	21.70	35.60	18.00	317.0	151.56
Feb.	26.40	31.00	21.70	34.80	18.10	246.0	131.44
Mar.	25.90	29.30	20.90	34.60	16.40	188.0	132.88
Apr.	24.60	30.20	19.00	34.40	12.70	98.0	104.97
May.	22.40	27.80	17.20	32.30	10.00	112.0	78.96
Jun.	20.80	25.90	15.80	30.90	8.50	90.0	60.43
Jul.	20.70	26.20	15.00	31.40	7.00	59.0	61.48
Aug.	21.70	28.20	15.20	33.60	7.20	83.0	75.39
Sep.	24.20	30.60	17.70	35.50	10.60	86.0	102.96
Oct.	25.20	31.10	19.30	35.90	13.00	153.0	126.92
Nov.	26.10	31.50	20.60	36.10	15.70	270.0	139.91
Dec.	26.20	31.10	21.30	35.40	16.90	270.0	148.10
Year	24.22	29.50	18.78	34.21	12.84	1972	1315.0

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	654
Compensated thermicity index.....(Itc):	654
Simple continentality index.....(Ic):	5.7
Diurnality index.....(Id):	13.0
Annual ombrothermic index.....(Io):	6.79
Monthly dry ombrothermic index.....(Iod1):	2.85
Bimonthly dry ombrothermic index.....(Iod2):	3.35
Three monthly dry ombrothermic index.....(Iod3):	3.42
Four monthly dry ombrothermic index.....(Iod4):	3.64
Annual ombro-evaporation index.....(Ioe):	2.73
Annual positive temperature.....(Tp):	2906
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	666
Positive precipitation.....(Pp):	1972

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	8	4	0	0	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Euhyperoceanic

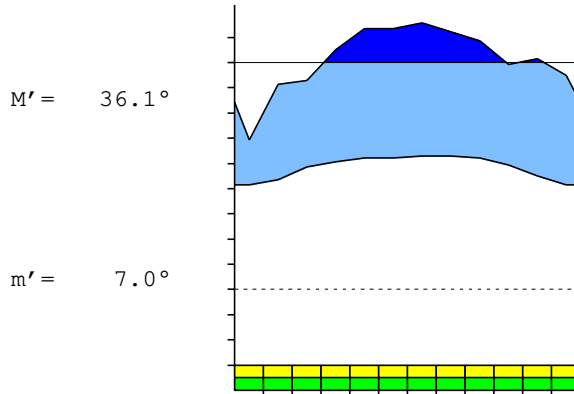
Bioclimate(Variant): TROPICAL PLUVIAL (HYGROPHYTIC)

Bioclimatic Belt...: LOW THERMOTROPICAL LOW HUMID

SAN JUAN YAPACANI (BOLIVIA)

277 m

P= 1972 17° 17' S 63° 50' W 20/21 y.
 T= 24.2° Ic= 5.7 Tp= 2906 Tn= 0
 m= 15.0° M= 26.2° Itc= 654 Io= 6.8



TROPICAL PLUVIAL (HYGROPHYTIC)
 LOW THERMOTROPICAL LOW HUMID

WATER INDEX CARD SAN JUAN YAPACANI (BOLIVIA)
 Altitude: 277 m. Latitude: 17° 17' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	20.7	61	59	-2	98	61	0	0	16	0.0
Aug.	21.7	75	83	2	100	75	0	5	11	0.1
Sep.	24.2	103	86	-17	83	103	0	0	5	-0.1
Oct.	25.2	127	153	17	100	127	0	9	7	0.2
Nov.	26.1	140	270	0	100	140	0	130	69	0.9
Dec.	26.2	148	270	0	100	148	0	122	95	0.8
Jan.	26.4	152	317	0	100	152	0	165	130	1.0
Feb.	26.4	131	246	0	100	131	0	115	122	0.8
Mar.	25.9	133	188	0	100	133	0	55	89	0.4
Apr.	24.6	105	98	-7	93	105	0	0	44	0.0
May.	22.4	79	112	7	100	79	0	26	35	0.4
Jun.	20.8	60	90	0	100	60	0	30	32	0.4
Year	24.2	1315	1972	*	*	1315	0	657	657	*

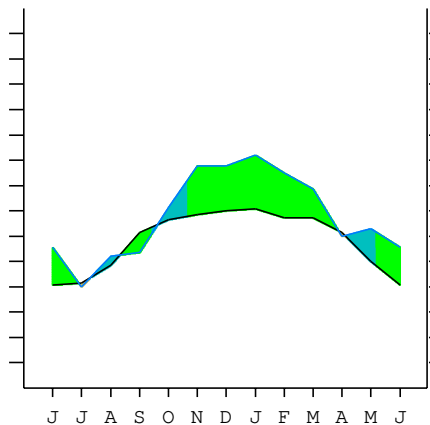
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SAN JUAN YAPACANI (BOLIVIA)

17°17' S 63°50' W 277 m 20/21 y.

T= 24.2 Ic= 5.7 TROPICAL PLUVIAL (HYGROPHYTIC)
 m= 15.0 Tp= 2906 LOW THERMOTROPICAL
 M= 26.2 Tn= 0 LOW HUMID
 M' = 36.1 Itc= 654
 m' = 7.0 Io= 6.8
 P= 1972 mm ———
 PE= 1315 mm ———

Imbibing	6 Apr.
Saturation	7 May.
Reserve Use	27 Mar.
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 [A5.2b.7b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 5. PLUVIAL
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trhd.Ttr.Hum

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1444
 Coldest semester of the year.....(Psw): 528
 Warmest four months period of the year.....(Pcm1): 1103
 Following warmest four months period.....(Pcm2): 488
 Positive precipitation dryest 3 months.....(Ppd): 228
 Positive precipitation dryest 2 months.....(Ppd2): 142
 Positive precipitation dryest 1 month.....(Ppd1): 59
 Positive precipitation warmest 3 months.....(Pps): 833
 Positive precipitation warmest 2 months.....(Pps2): 563
 Positive precipitation warmest 1 month.....(Pps1): 317
 Positive precipitation coldest 3 months.....(Ppw): 232
 Positive precipitation coldest 2 months.....(Ppw2): 149
 Positive precipitation coldest 1 month.....(Ppw1): 59

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	232	509	833	398

Tropical rainfall rhythms: 1 > 4 > 2 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 26.4
 Average coldest month [T].....(Tmin): 20.7
 Maximum temp. warmest month [M].....(Tmmax): 31.5
 Minimum temp. coldest month [m].....(Tmmin): 15.0
 Absolute Max.temp. warmest month [M'].....(Tamax): 36.1
 Absolute Min.temp. coldest month [m'].....(Tamin): 7.0
 First warmest contrasted month [M].....(Tcmax): 28.2 (8)
 First coldest contrasted month [m].....(Tcmin): 15.2 (8)
 Dry station temperature.....(Td): 666
 Positive temperature dryest 3 months.....(Tpd): 666
 Positive temperature dryest 2 months.....(Tpd2): 424
 Positive temperature dryest 1 month.....(Tpd1): 207
 Positive temperature warmest 3 months.....(Tps): 790
 Positive temperature warmest 2 months.....(Tps2): 528
 Positive temperature warmest 1 month.....(Tps1): 264
 Positive temperature coldest 3 months.....(Tpw): 632
 Positive temperature coldest 2 months.....(Tpw2): 415
 Positive temperature coldest 1 month.....(Tpw1): 207

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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): 0.67
 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)	2700	3170	2460	1880	980	1120	900	590	830	860	1530	2700
Tp	262	264	264	259	246	224	208	207	217	242	252	261
Io (Iom)	10.3	12.0	9.32	7.26	3.98	5.00	4.33	2.85	3.82	3.55	6.07	10.3
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	8330 / 790			3980 / 729			2320 / 632			5090 / 755		
Io (Iot)	10.54			5.460			3.671			6.742		
Semesters	December-May						June-November					
Pp(x10)/Tp	12310 / 1519						7410 / 1387					
Io (Iosm)	8.104						5.342					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 19720/2906=6.79 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2700	3170	2460	1880	980	1120	900	590	830	860	1530	2700
Tp [T*10]	262	264	264	259	246	224	208	207	217	242	252	261
Iom [Pp/Tp]	\$\$	\$\$	932	726	398	500	433	285	382	355	607	\$\$
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	8330 / 790			3980 / 729			2320 / 632			5090 / 755		
Iot [Pp/Tp]	1054			546			367			674		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	5.70
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		12.22
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		7.14
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.84
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		81.43
+ Temperate warm (100>R>60)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		57.63
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		257.02
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		1.23
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE]		1.50
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		50.96
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

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

Thornthwaite (1948)

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	1.29	0.97	0.73	0.36	0.44	0.36	0.23	0.32	0.32	0.59	1.08	1.08	
T-E ratio	11.88	11.88	11.65	11.07	10.08	9.36	9.32	9.77	10.89	11.34	11.75	11.79	
Precipitation-effectiveness:	77.87						Temperature-efficiency						130.77
Moisture Index [MI=100*(P-PE)/PE]	49.96												
+ B2.Humid medium-humid (40<MI<60)													
Index of dryness [DI=100*d/PE]	0.00												
+ No deficit (0<DI<16.7)													
Index of humidity [HI=100*s/PE]	49.95												
+ Strong surplus (20<HI)													
Potential Evapotranspiration PE	1315.00												
+ Forth mesothermic (997<PE<1440)													

