

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

TABEL BALA (ALGERIA)

Altitude: 595 m.

Latitude: 29°27'N Longitude: 3°10'W
 Temperature observation period.: 1984-1994 (11)
 Rainfall observation period....: 1979-1994 (16)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	13.06	19.44	6.67	27.22	-1.11	0.0	11.95
Feb.	15.56	22.78	8.33	32.22	2.78	2.5	20.35
Mar.	19.45	26.67	12.22	35.00	5.00	5.1	50.25
Apr.	24.45	32.22	16.67	38.33	9.44	1.3	110.91
May.	28.06	35.56	20.56	43.89	11.11	1.3	173.14
Jun.	33.62	41.67	25.56	46.67	18.89	0.0	223.28
Jul.	35.84	43.89	27.78	47.22	21.67	1.3	250.20
Aug.	34.72	42.22	27.22	47.22	21.11	2.5	227.46
Sep.	31.39	38.33	24.44	42.78	17.22	1.3	179.88
Oct.	25.00	31.67	18.33	38.89	11.67	1.3	109.31
Nov.	18.61	23.89	13.33	28.33	7.22	7.6	37.54
Dec.	14.45	20.00	8.89	28.89	0.00	2.5	16.31
Year	24.52	31.53	17.50	38.05	10.42	27	1410.6

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	506
Compensated thermicity index.....(Itc):	548
Simple continentality index.....(Ic):	22.8
Diurnality index.....(Id):	16.1
Annual ombrothermic index.....(Io):	0.09
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	0.02
Three monthly dry ombrothermic index.....(Iod3):	0.03
Four monthly dry ombrothermic index.....(Iod4):	0.07
Annual ombro-evaporation index.....(Ioe):	0.41
Annual positive temperature.....(Tp):	2942
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	861
Positive precipitation.....(Pp):	27

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

Latitudinal Belt...: Subtropical

Continentalty.....: Continental - Low Subcontinental

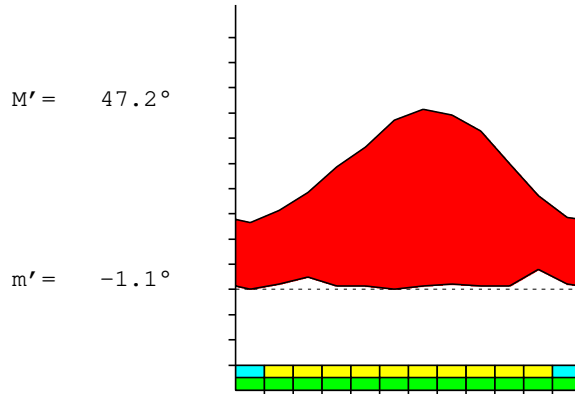
Bioclimate(Variant): TROPICAL HYPERDESERTIC (EXTREME)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW ULTRAHYPERARID

TABEL BALA (ALGERIA)

595 m

P= 27 29° 27'N 3° 10'W 11/16 y.
 T= 24.5° Ic= 22.8 Tp= 2942 Tn= 0
 m= 6.7° M= 19.4° Itc= 548 Io= 0.1



TROPICAL HYPERDESERTIC (EXTREME)
 UPPER INFRATROPICAL LOW ULTRAHYPERARID

WATER INDEX CARD TABEL BALA (ALGERIA)
 Altitude: 595 m. Latitude: 29° 27'N

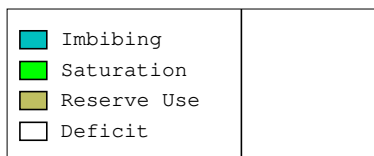
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	13.1	12	0	0	0	0	12	0	0	-1.0
Feb.	15.6	20	3	0	0	3	18	0	0	-0.8
Mar.	19.5	50	5	0	0	5	45	0	0	-0.8
Apr.	24.5	111	1	0	0	1	110	0	0	-0.9
May.	28.1	173	1	0	0	1	172	0	0	-0.9
Jun.	33.6	223	0	0	0	0	223	0	0	-1.0
Jul.	35.8	250	1	0	0	1	249	0	0	-0.9
Aug.	34.7	227	3	0	0	3	225	0	0	-0.9
Sep.	31.4	180	1	0	0	1	179	0	0	-0.9
Oct.	25.0	109	1	0	0	1	108	0	0	-0.9
Nov.	18.6	38	8	0	0	8	30	0	0	-0.7
Dec.	14.4	16	3	0	0	3	14	0	0	-0.8
Year	24.5	1411	27	*	*	27	1384	0	0	*

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

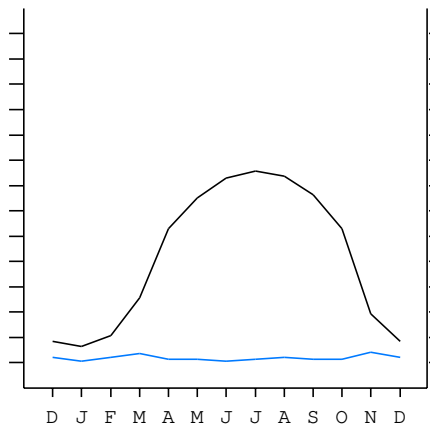
TABEL BALA (ALGERIA)

29°27'N 3°10'W 595 m 11/16 y.

T= 24.5 Ic= 22.8 TROPICAL HYPERDESERTIC (EXTREME)
 m= 6.7 Tp= 2942 UPPER INFRATROPICAL
 M= 19.4 Tn= 0 LOW ULTRAHYPERARID
 M' = 47.2 Itc= 548
 m' = -1.1 Io= 0.1
 P= 27 mm ———
 PE= 1411 mm ———



All over the year,
 there is hydric deficit



TABEL BALA (ALGERIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C2a]
 + Type: C. Continental
 + Subtype: 2. Subcontinental
 + Variant: a. Low
 Thermic types [A3.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A1.1a.1b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 1. HYPERDESERTIC
 + Bioclimatic variant ..:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 1. ULTRAHYPERARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trpl.Itr.Uha

TABEL BALA (ALGERIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 8
 Coldest semester of the year.....(Psw): 19
 Warmest four months period of the year.....(Pcm1): 5
 Following warmest four months period.....(Pcm2): 11
 Positive precipitation dryest 3 months.....(Ppd): 3
 Positive precipitation dryest 2 months.....(Ppd2): 1
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 4
 Positive precipitation warmest 2 months.....(Pps2): 4
 Positive precipitation warmest 1 month.....(Pps1): 1
 Positive precipitation coldest 3 months.....(Ppw): 5
 Positive precipitation coldest 2 months.....(Ppw2): 3
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	5	7	3	10

Seasonal rainfall rhythms: F > P > W > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 35.8
 Average coldest month [T].....(Tmin): 13.1
 Maximum temp. warmest month [M].....(Tmmax): 43.9
 Minimum temp. coldest month [m].....(Tmmin): 6.7
 Absolute Max.temp. warmest month [M'].....(Tamax): 47.2
 Absolute Min.temp. coldest month [m'].....(Tamin): -1.1
 First warmest contrasted month [M].....(Tcmax): 41.7 (6)
 First coldest contrasted month [m].....(Tcmin): 25.6 (6)
 Dry station temperature.....(Td): 861
 Positive temperature dryest 3 months.....(Tpd): 861
 Positive temperature dryest 2 months.....(Tpd2): 617
 Positive temperature dryest 1 month.....(Tpd1): 131
 Positive temperature warmest 3 months.....(Tps): 1042
 Positive temperature warmest 2 months.....(Tps2): 706
 Positive temperature warmest 1 month.....(Tps1): 358
 Positive temperature coldest 3 months.....(Tpw): 431
 Positive temperature coldest 2 months.....(Tpw2): 275
 Positive temperature coldest 1 month.....(Tpw1): 131

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 52.83
 Mediterranean index of July.[PE/P].....(Im1): 192.46
 Mediterranean index of July & August.....(Im2): 125.70
 Mediterranean index of June, July & August....(Im3): 184.46

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	25	0	25	51	13	13	0	13	25	13	13	76
Tp	145	131	156	195	245	281	336	358	347	314	250	186
Io (Iom)	0.17	0.00	0.16	0.26	0.05	0.05	0.00	0.04	0.07	0.04	0.05	0.41
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	50 / 431			77 / 720			38 / 1042			102 / 750		
Io (Iot)	0.116			0.107			0.036			0.136		
Semesters	December-May						June-November					
Pp(x10)/Tp	127 / 1150						140 / 1792					
Io (Iosm)	0.110						0.078					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 267/2942=0.09 [Upper ultrahyperarid \(2\) \[2269\]](#)

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	25	0	25	51	13	13	0	13	25	13	13	76
Tp [T*10]	145	131	156	195	245	281	336	358	347	314	250	186
Iom [Pp/Tp]	17	0	16	26	5	5	0	4	7	4	5	41
Avm [200-Iom]	183	200	184	174	195	195	200	196	193	196	195	159
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	50 / 431			77 / 720			38 / 1042			102 / 750		
Iot [Pp/Tp]	12			11			4			14		
Avs E[Avm<200]	567			564			589			550		
Lower ultrahyperarid [9]						Upper ultrahyperarid [5]						
Lower hyperarid [1]						Strong lower arid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	22.78
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		58.37
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		46.95
+ Subcontinental (40<CI<60)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		2.11
+ Continental (1.7<CI<2.3)		
Rainfall Index of Lang (1925) [R=P/T]		1.09
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		0.77
+ Extremely arid -desert- (5>Ia>0)		
I of Emberger (1930) [Q=100*P/(Tmmax ² -Tmmin ²)]		1.42
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		91.83
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.02
+ Hyperarid (0.05>Im)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		2.16
+ 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	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01
T-E ratio	5.88	7.00	8.75	11.00	12.63	15.13	16.13	15.62	14.13	11.25	8.37	6.50
Precipitation-effectiveness:	0.75					Temperature-efficiency						
Moisture Index [MI=100*(P-PE)/PE]												
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												
+ Forth mesothermic (997<PE<1440)												

