

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

EL GOLEA (ALGERIA)

Altitude: 400 m.

Latitude: 30°34'N Longitude: 2°52'E

Temperature observation period.: 1979-1994 (16)

Rainfall observation period....: 1979-1994 (16)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	10.00	17.22	2.78	27.22	-4.44	2.5	9.13
Feb.	12.78	20.00	5.56	35.00	-2.22	7.6	16.95
Mar.	16.67	23.89	9.44	36.67	-1.11	12.7	40.71
Apr.	21.11	28.89	13.33	39.44	4.44	1.0	80.02
May.	25.00	32.22	17.78	42.22	7.22	0.5	137.14
Jun.	31.11	38.89	23.33	47.22	13.33	0.5	201.71
Jul.	33.89	41.67	26.11	47.78	16.67	0.3	233.58
Aug.	33.06	40.56	25.56	48.89	15.56	0.3	214.33
Sep.	29.45	37.22	21.67	45.00	10.56	0.5	163.89
Oct.	23.06	30.56	15.56	41.67	3.89	7.6	91.86
Nov.	15.56	22.78	8.33	30.56	0.00	10.2	28.95
Dec.	11.11	17.78	4.44	27.78	-5.00	7.6	11.81
Year	21.90	29.31	14.49	39.12	4.91	51	1230.1

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	419
Compensated thermicity index.....(Itc):	477
Simple continentality index.....(Ic):	23.9
Diurnality index.....(Id):	15.6
Annual ombrothermic index.....(Io):	0.20
Monthly estival ombrothermic index.....(Ios1):	0.01
Bimonthly estival ombrothermic index.....(Ios2):	0.01
Three monthly estival ombrothermic index.....(Ios3):	0.01
Four monthly estival ombrothermic index.....(Ios4):	0.01
Annual ombro-evaporation index.....(Ioe):	0.23
Annual positive temperature.....(Tp):	2628
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	981
Positive precipitation.....(Pp):	51

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

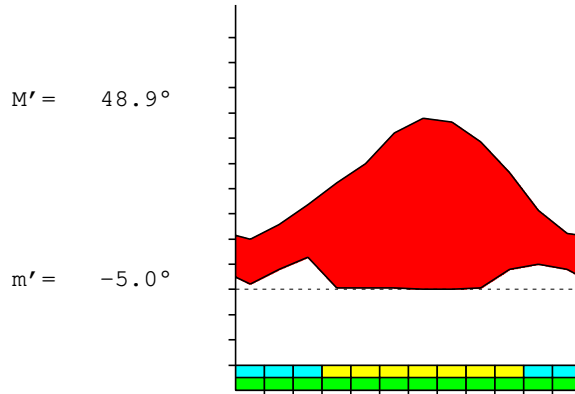
Bioclimate.....: MEDITERRANEAN HYPERDESERTIC CONTINENTAL

Bioclimatic Belt...: LOW INFRAMEDITERRANEAN UPPER ULTRAHYPERARID

EL GOLEA (ALGERIA)

400 m

P= 51 30° 34'N 2° 52'E 16/16 y.
 T= 21.9° Ic= 23.9 Tp= 2628 Tn= 0
 m= 2.8° M= 17.2° Itc= 477 Io= 0.2



MEDITERRANEAN HYPERDESERTIC CONTINENTAL
 LOW INFRAMEDITERRANEAN UPPER ULTRAHYPERARID

WATER INDEX CARD

EL GOLEA (ALGERIA)

Altitude: 400 m.

Latitude: 30° 34'N

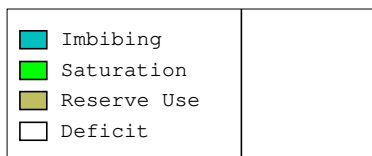
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	10.0	9	3	0	0	3	7	0	0	-0.7
Feb.	12.8	17	8	0	0	8	9	0	0	-0.5
Mar.	16.7	41	13	0	0	13	28	0	0	-0.6
Apr.	21.1	80	1	0	0	1	79	0	0	-0.9
May.	25.0	137	1	0	0	1	137	0	0	-0.9
Jun.	31.1	202	1	0	0	1	201	0	0	-0.9
Jul.	33.9	234	0	0	0	0	233	0	0	-0.9
Aug.	33.1	214	0	0	0	0	214	0	0	-0.9
Sep.	29.5	164	1	0	0	1	163	0	0	-0.9
Oct.	23.1	92	8	0	0	8	84	0	0	-0.9
Nov.	15.6	29	10	0	0	10	19	0	0	-0.6
Dec.	11.1	12	8	0	0	8	4	0	0	-0.3
Year	21.9	1230	51	*	*	51	1179	0	0	*

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

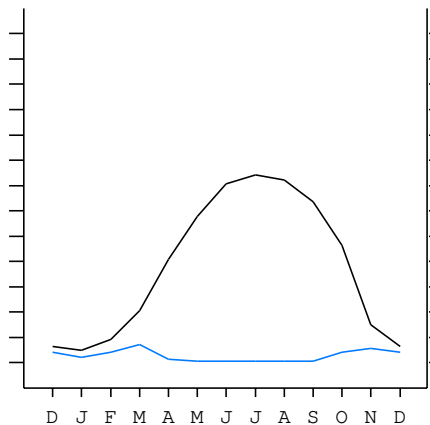
EL GOLEA (ALGERIA)

30°34'N 2°52'E 400 m 16/16 y.

T= 21.9 Ic= 23.9 MEDITERRANEAN HYPERDESERTIC CONTINENTAL
 m= 2.8 Tp= 2628 LOW INFRAMEDITERRANEAN
 M= 17.2 Tn= 0 UPPER ULTRAHYPERARID
 M' = 48.9 Itc= 477
 m' = -5.0 Io= 0.2
 P= 51 mm ———
 PE= 1230 mm ———



All over the year,
 there is hydric deficit



EL GOLEA (ALGERIA)

Latitude: 30°34'N Longitude: 2°52'E Altitude: 400 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C2a]
 + Type: C. Continental
 + Subtype: 2. Subcontinental
 + Variant: a. Low

Thermic types [A3.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm

Bioclimatic types [B1.1b.1a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 1. HYPERDESERTIC CONTINENTAL
 + Bioclimatic variant ..:
 + Thermic type.....: 1. INFRAMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 1. ULTRAHYPERARID
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification: Mepo.Ime.Uha

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 10
 Coldest semester of the year.....(Psw): 42
 Warmest four months period of the year.....(Pcm1): 2
 Following warmest four months period.....(Pcm2): 28
 Positive precipitation dryest 3 months.....(Ppd): 1
 Positive precipitation dryest 2 months.....(Ppd2): 1
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 1
 Positive precipitation warmest 2 months.....(Pps2): 1
 Positive precipitation warmest 1 month.....(Pps1): 0
 Positive precipitation coldest 3 months.....(Ppw): 18
 Positive precipitation coldest 2 months.....(Ppw2): 10
 Positive precipitation coldest 1 month.....(Ppw1): 3

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	17	14	1	18

Seasonal rainfall rhythms: F > W > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 33.9
 Average coldest month [T].....(Tmin): 10.0
 Maximum temp. warmest month [M].....(Tmmax): 41.7
 Minimum temp. coldest month [m].....(Tmmin): 2.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 48.9
 Absolute Min.temp. coldest month [m'].....(Tamin): -5.0
 First warmest contrasted month [M].....(Tcmax): 28.9 (4)
 First coldest contrasted month [m].....(Tcmin): 13.3 (4)
 Estival temperature.....(Ts): 981
 Positive temperature dryest 3 months.....(Tpd): 981
 Positive temperature dryest 2 months.....(Tpd2): 670
 Positive temperature dryest 1 month.....(Tpd1): 339
 Positive temperature warmest 3 months.....(Tps): 981
 Positive temperature warmest 2 months.....(Tps2): 670
 Positive temperature warmest 1 month.....(Tps1): 339
 Positive temperature coldest 3 months.....(Tpw): 339
 Positive temperature coldest 2 months.....(Tpw2): 211
 Positive temperature coldest 1 month.....(Tpw1): 100

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 23.98
 Mediterranean index of July.[PE/P].....(Im1): 778.59
 Mediterranean index of July & August.....(Im2): 746.50
 Mediterranean index of June, July & August....(Im3): 590.55

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	76	25	76	127	10	5	5	3	3	5	76	102
Tp	111	100	128	167	211	250	311	339	331	295	231	156
Io (Iom)	0.68	0.25	0.59	0.76	0.05	0.02	0.02	0.01	0.01	0.02	0.33	0.66
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	177 / 339			142 / 628			11 / 981			183 / 681		
Io (Iot)	0.522			0.226			0.011			0.269		
Semesters	December-May						June-November					
Pp(x10)/Tp	319 / 967						194 / 1661					
Io (Iosm)	0.330						0.117					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 513/2628=0.20 Lower hyperarid (3) [2061]

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	76	25	76	127	10	5	5	3	3	5	76	102
Tp [T*10]	111	100	128	167	211	250	311	339	331	295	231	156
Iom [Pp/Tp]	68	25	59	76	5	2	2	1	1	2	33	66
Avm [200-Iom]	132	175	141	124	195	198	198	199	199	198	167	134
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	177 / 339			142 / 628			11 / 981			183 / 681		
Iot [Pp/Tp]	52			23			1			27		
Avs E[Avm<200]	447			517			597			500		
Lower ultrahyperarid [7]							Lower hyperarid [2]					
Upper hyperarid [2]							Weak lower arid [4]					
Strong upper arid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	23.89
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		59.46
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		48.45
+ Subcontinental (40<CI<60)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		2.14
+ Continental (1.7<CI<2.3)		
Rainfall Index of Lang (1925) [R=P/T]		2.34
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		1.61
+ Extremely arid -desert- (5>Ia>0)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		2.97
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		42.69
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.04
+ Hyperarid (0.05>Im)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		3.14
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate
- + Region
- + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.01	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.03
T-E ratio	4.50	5.75	7.50	9.50	11.25	14.00	15.25	14.88	13.25	10.38	7.00	5.00
Precipitation-effectiveness: 1.80						Temperature-efficiency						118.26
Moisture Index [MI=100*(P-PE)/PE]												-95.83
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												95.82
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												1230.08
+ Forth mesothermic (997<PE<1440)												

