

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

OUALLEN (ALGERIA)

Altitude: 347 m.

Latitude: 24°36'N Longitude: 1°14'E

Temperature observation period.: 1981-1994 (14)

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

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	16.67	23.33	10.00	33.89	-0.56	1.3	16.15
Feb.	19.17	26.67	11.67	35.56	1.11	1.3	28.25
Mar.	23.34	31.11	15.56	38.89	2.78	2.5	76.42
Apr.	27.22	35.00	19.44	45.00	2.78	1.3	149.74
May.	30.83	38.33	23.33	46.67	13.89	1.3	195.68
Jun.	36.39	43.89	28.89	47.78	20.56	1.3	244.71
Jul.	37.78	45.00	30.56	48.33	15.56	1.3	264.16
Aug.	36.95	43.33	30.56	51.67	21.67	2.5	245.44
Sep.	34.45	41.11	27.78	50.56	21.11	1.3	203.11
Oct.	28.62	35.56	21.67	42.78	12.78	1.3	150.94
Nov.	21.67	28.89	14.44	37.78	7.78	5.1	49.01
Dec.	17.50	24.44	10.56	33.33	2.22	1.3	19.49
Year	27.55	34.72	20.37	42.69	10.14	22	1643.1

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	609
Compensated thermicity index.....(Itc):	625
Simple continentality index.....(Ic):	21.1
Diurnality index.....(Id):	15.6
Annual ombrothermic index.....(Io):	0.07
Monthly dry ombrothermic index.....(Iod1):	0.05
Bimonthly dry ombrothermic index.....(Iod2):	0.04
Three monthly dry ombrothermic index.....(Iod3):	0.04
Four monthly dry ombrothermic index.....(Iod4):	0.05
Annual ombro-evaporation index.....(Ioe):	0.70
Annual positive temperature.....(Tp):	3306
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	944
Positive precipitation.....(Pp):	22

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

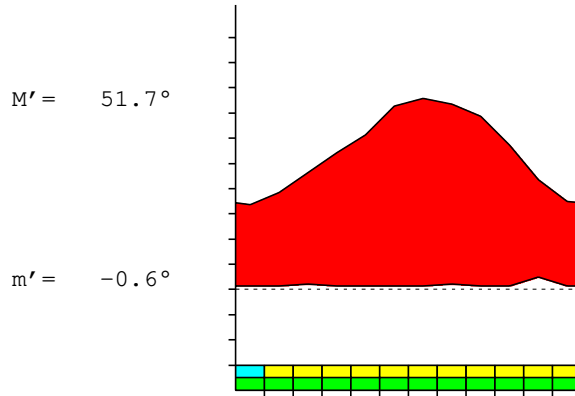
Bioclimate(Variant): TROPICAL HYPERDESERTIC (EXTREME)

Bioclimatic Belt...: LOW INFRATROPICAL LOW ULTRAHYPERARID

OUALLEN (ALGERIA)

347 m

P= 22 24° 36'N 1° 14'E 14/16 y.
 T= 27.5° Ic= 21.1 Tp= 3306 Tn= 0
 m= 10.0° M= 23.3° Itc= 625 Io= 0.1



TROPICAL HYPERDESERTIC (EXTREME)
 LOW INFRATROPICAL LOW ULTRAHYPERARID

WATER INDEX CARD OUALLEN (ALGERIA)
 Altitude: 347 m. Latitude: 24° 36'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	16.7	16	1	0	0	1	15	0	0	-0.9
Feb.	19.2	28	1	0	0	1	27	0	0	-0.9
Mar.	23.3	76	3	0	0	3	74	0	0	-0.9
Apr.	27.2	150	1	0	0	1	148	0	0	-0.9
May.	30.8	196	1	0	0	1	194	0	0	-0.9
Jun.	36.4	245	1	0	0	1	243	0	0	-0.9
Jul.	37.8	264	1	0	0	1	263	0	0	-0.9
Aug.	37.0	245	3	0	0	3	243	0	0	-0.9
Sep.	34.5	203	1	0	0	1	202	0	0	-0.9
Oct.	28.6	151	1	0	0	1	150	0	0	-0.9
Nov.	21.7	49	5	0	0	5	44	0	0	-0.8
Dec.	17.5	19	1	0	0	1	18	0	0	-0.9
Year	27.5	1643	22	*	*	22	1621	0	0	*

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

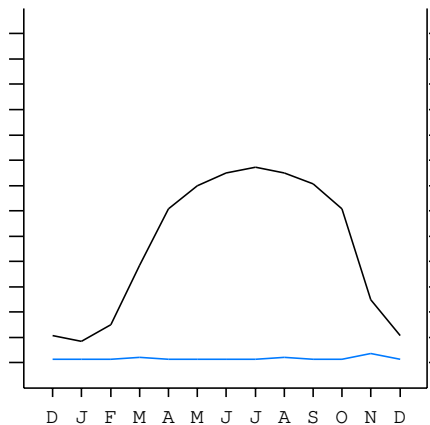
OUALLEN (ALGERIA)

24°36'N 1°14'E 347 m 14/16 y.

T= 27.5 Ic= 21.1 TROPICAL HYPERDESERTIC (EXTREME)
 m= 10.0 Tp= 3306 LOW INFRATROPICAL
 M= 23.3 Tn= 0 LOW ULTRAHYPERARID
 M' = 51.7 Itc= 625
 m' = -0.6 Io= 0.1
 P= 22 mm ———
 PE= 1643 mm ———

Imbibing	
Saturation	
Reserve Use	
Deficit	

All over the year,
 there is hydric deficit



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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 [A1.1b.1b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 1. HYPERDESERTIC
 + Bioclimatic variant ..:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 1. ULTRAHYPERARID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trpl.Itr.Uha

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 9
 Coldest semester of the year.....(Psw): 13
 Warmest four months period of the year.....(Pcm1): 6
 Following warmest four months period.....(Pcm2): 9
 Positive precipitation dryest 3 months.....(Ppd): 4
 Positive precipitation dryest 2 months.....(Ppd2): 3
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 5
 Positive precipitation warmest 2 months.....(Pps2): 4
 Positive precipitation warmest 1 month.....(Pps1): 1
 Positive precipitation coldest 3 months.....(Ppw): 4
 Positive precipitation coldest 2 months.....(Ppw2): 3
 Positive precipitation coldest 1 month.....(Ppw1): 1

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

Seasonal rainfall rhythms: F > P > S > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 37.8
 Average coldest month [T].....(Tmin): 16.7
 Maximum temp. warmest month [M].....(Tmmax): 45.0
 Minimum temp. coldest month [m].....(Tmmin): 10.0
 Absolute Max.temp. warmest month [M'].....(Tamax): 51.7
 Absolute Min.temp. coldest month [m'].....(Tamin): -0.6
 First warmest contrasted month [M].....(Tcmax): 35.0 (4)
 First coldest contrasted month [m].....(Tcmin): 19.4 (4)
 Dry station temperature.....(Td): 944
 Positive temperature dryest 3 months.....(Tpd): 944
 Positive temperature dryest 2 months.....(Tpd2): 358
 Positive temperature dryest 1 month.....(Tpd1): 167
 Positive temperature warmest 3 months.....(Tps): 1111
 Positive temperature warmest 2 months.....(Tps2): 747
 Positive temperature warmest 1 month.....(Tps1): 378
 Positive temperature coldest 3 months.....(Tpw): 533
 Positive temperature coldest 2 months.....(Tpw2): 342
 Positive temperature coldest 1 month.....(Tpw1): 167

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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											
Agelid.....[m' > 0] (Pf)		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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 75.37
 Mediterranean index of July.[PE/P].....(Im1): 203.20
 Mediterranean index of July & August.....(Im2): 134.11
 Mediterranean index of June, July & August....(Im3): 147.90

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	13	13	13	25	13	13	13	13	25	13	13	51
Tp	175	167	192	233	272	308	364	378	370	345	286	217
Io (Iom)	0.07	0.08	0.07	0.11	0.05	0.04	0.04	0.03	0.07	0.04	0.05	0.24
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	39 / 533			51 / 814			51 / 1111			77 / 847		
Io (Iot)	0.073			0.063			0.046			0.091		
Semesters	December-May						June-November					
Pp(x10)/Tp	90 / 1347						128 / 1959					
Io (Iosm)	0.067						0.065					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 218/3306=0.07 Lower ultrahyperarid (1) [2313]

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	13	13	13	25	13	13	13	13	25	13	13	51
Tp [T*10]	175	167	192	233	272	308	364	378	370	345	286	217
Iom [Pp/Tp]	7	8	7	11	5	4	4	3	7	4	5	24
Avm [200-Iom]	193	192	193	189	195	196	196	197	193	196	195	176
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	39 / 533			51 / 814			51 / 1111			77 / 847		
Iot [Pp/Tp]	7			6			5			9		
Avs E[Avm<200]	578			580			586			568		
Lower ultrahyperarid [13]							Upper ultrahyperarid [2]					
Lower hyperarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 21.11
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 65.81
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 49.20
 + Subcontinental (40<CI<60)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 2.29
 + Continental (1.7<CI<2.3)
 Rainfall Index of Lang (1925) [R=P/T]: 0.79
 + Steppic (40>R>0)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 0.58
 + Extremely arid -desert- (5>Ia>0)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 1.13
 + Arid (30>Q>0)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 126.37
 + Extremely arid (DR>6)
 Aridity Index of UNEP [I=P/PE]: 0.01
 + Hyperarid (0.05>Im)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 1.19
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 1. Termoeremic (Desertic warm)
 + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
T-E ratio	7.50	8.63	10.50	12.25	13.87	16.38	17.00	16.63	15.50	12.88	9.75	7.88
Precipitation-effectiveness: 0.52						Temperature-efficiency: 148.77						
Moisture Index [MI=100*(P-PE)/PE]: -98.67 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]: 98.67 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 1643.10 + Megathermic (PE>1440)												

