

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

S.Rivas-Martinez(+) & S.Rivas-Saenz

(Adapted to Synoptical Table 14/02/2020)

MOGOCHA (RUSSIA)

Altitude: 619 m.

Latitude: 53°44'N Longitude: 119°47'E

Temperature observation period.: 1954-1994 (41)

Rainfall observation period....: 1984-1994 (11)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	-28.89	-21.67	-36.11	-3.89	-52.78	3.8	0.00
Feb.	-22.50	-13.89	-31.11	5.00	-47.78	3.6	0.00
Mar.	-14.72	-5.00	-24.44	12.78	-43.89	8.4	0.00
Apr.	-2.78	5.00	-10.56	22.22	-33.89	20.3	0.00
May.	6.94	14.44	-0.56	28.89	-17.22	35.1	61.64
Jun.	13.62	21.67	5.56	33.89	-7.22	83.1	110.29
Jul.	17.22	25.00	9.44	36.11	-1.11	89.9	134.64
Aug.	14.72	22.22	7.22	33.89	-30.56	70.1	105.88
Sep.	7.50	15.00	0.00	30.00	-15.00	46.5	50.82
Oct.	-3.06	4.44	-10.56	22.22	-32.22	18.3	0.00
Nov.	-18.34	-11.11	-25.56	7.78	-43.89	12.2	0.00
Dec.	-27.78	-21.67	-33.89	0.00	-51.11	6.9	0.00
Year	-4.84	2.87	-12.55	19.07	-31.39	398	463.27

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-626
Compensated thermicity index.....(Itc):	-53
Simple continentality index.....(Ic):	46.1
Diurnality index.....(Id):	19.4
Annual ombrothermic index.....(Io):	5.41
Monthly estival ombrothermic index.....(Ios1):	5.22
Bimonthly estival ombrothermic index.....(Ios2):	5.01
Threemonthly estival ombrothermic index.....(Ios3):	5.34
Fourmonthly estival ombrothermic index.....(Ios4):	5.30
Annual ombro-evaporation index.....(Ioe):	0.86
Annual positive temperature.....(Tp):	600
Annual negative temperature.....(Tn):	1181
Estival temperature.....(Ts):	456
Positive precipitation.....(Pp):	325

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	5	0	0	0	7

Latitudinal Belt...: Low Subtemperate

Continentality.....: Continental - Low Hypercontinental

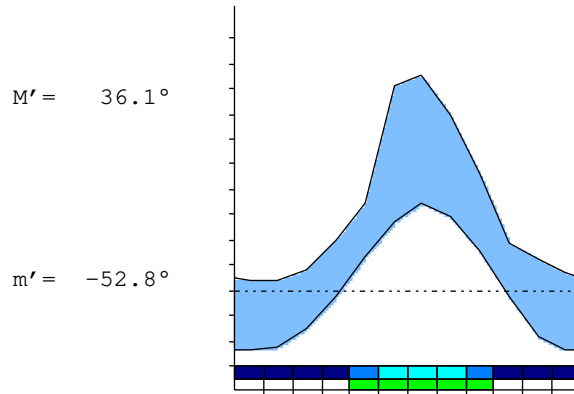
Bioclimate.....: BOREAL HYPERCONTINENTAL

Bioclimatic Belt...: UPPER MESOBOREAL UPPER SUBHUMID

MOGOCHA (RUSSIA)

619 m

P= 398 53° 44'N 119° 47'E 41/11 y.
 T= -4.8 ° Ic= 46.1 Tp= 600 Tn= 1181
 m= -36.1 ° M= -21.7 ° Itc= -53 Io= 5.4



BOREAL HYPERCONTINENTAL
 UPPER MESOBOREAL UPPER SUBHUMID

WATER INDEX CARD MOGOCHA (RUSSIA)
 Altitude: 619 m. Latitude: 53° 44'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-28.9	0	4	4	41	0	0	0	0	*
Feb.	-22.5	0	4	4	45	0	0	0	0	*
Mar.	-14.7	0	8	8	53	0	0	0	0	*
Apr.	-2.8	0	20	20	73	0	0	0	0	*
May.	6.9	62	35	-27	47	62	0	0	0	-0.4
Jun.	13.6	110	83	-27	20	110	0	0	0	-0.2
Jul.	17.2	135	90	-20	0	110	25	0	0	-0.3
Aug.	14.7	106	70	0	0	70	36	0	0	-0.3
Sep.	7.5	51	47	0	0	47	4	0	0	0.0
Oct.	-3.1	0	18	18	18	0	0	0	0	*
Nov.	-18.3	0	12	12	30	0	0	0	0	*
Dec.	-27.8	0	7	7	37	0	0	0	0	*
Year	-4.8	463	398	*	*	398	65	0	0	*

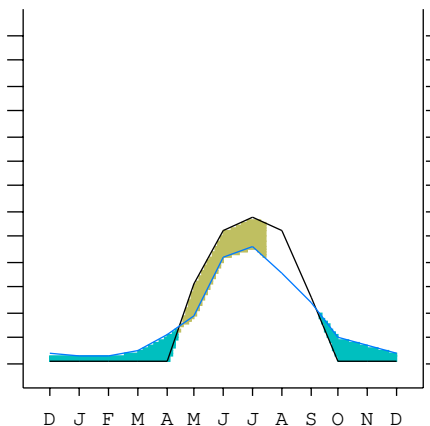
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

MOGOCHA (RUSSIA)

53°44'N 119°47'E 619 m 41/11 y.

T= -4.8 Ic= 46.1 BOREAL HYPERCONTINENTAL
 m= -36.1 Tp= 600 UPPER MESOBOREAL
 M= -21.7 Tn= 1181 UPPER SUBHUMID
 M' = 36.1 Itc= -53
 m' = -52.8 Io= 5.4
 P= 398 mm ———
 PE= 463 mm ———

Imbibing	6 Sep.
Saturation	14 Apr.
Reserve Use	14 Jul.
Deficit	



MOGOCHA (RUSSIA)

Latitude: 53°44'N Longitude: 119°47'E Altitude: 619 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [C4a]
 + Type: C. Continental
 + Subtype: 4. Hypercontinental
 + Variant: a. Low

Thermic types [B2.D8]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 2. Low Subtemperate
 + Thermic type: D. Gelid
 + Thermic subtype: 8. Ultramicrothermic

Bioclimatic types [D2.3a.6a]
 + Macrobioclimate: D. BOREAL
 + Bioclimate: 2. HYPERCONTINENTAL
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOBOREAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER

Bioclimatic ClassificationBohc.Mbo.Shu.Hco

MOGOCHA (RUSSIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 345
 Coldest semester of the year.....(Psw): 53
 Warmest four months period of the year.....(Pcm1): 290
 Following warmest four months period.....(Pcm2): 41
 Positive precipitation dryest 3 months.....(Ppd): 0
 Positive precipitation dryest 2 months.....(Ppd2): 0
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 243
 Positive precipitation warmest 2 months.....(Pps2): 160
 Positive precipitation warmest 1 month.....(Pps1): 90
 Positive precipitation coldest 3 months.....(Ppw): 0
 Positive precipitation coldest 2 months.....(Ppw2): 0
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	14	63	243	77

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 17.2
 Average coldest month [T].....(Tmin): -28.9
 Maximum temp. warmest month [M].....(Tmax): 25.0
 Minimum temp. coldest month [m].....(Tmin): -36.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 36.1
 Absolute Min.temp. coldest month [m'].....(Tamin): -52.8
 First warmest contrasted month [M].....(Tcmax): -5.0 (3)
 First coldest contrasted month [m].....(Tcmin): -24.4 (3)
 Estival temperature.....(Ts): 456
 Positive temperature dryest 3 months.....(Tpd): 0
 Positive temperature dryest 2 months.....(Tpd2): 0
 Positive temperature dryest 1 month.....(Tpd1): 0
 Positive temperature warmest 3 months.....(Tps): 456
 Positive temperature warmest 2 months.....(Tps2): 319
 Positive temperature warmest 1 month.....(Tps1): 172
 Positive temperature coldest 3 months.....(Tpw): 0
 Positive temperature coldest 2 months.....(Tpw2): 0
 Positive temperature coldest 1 month.....(Tpw1): 0

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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			
Ultragelid...[M' <=0] (Pf)	o											o
Hypergelid...[M <=0] (Pf)	o	o	o								o	o
Gelid.....[T <=0] (Pf)	o	o	o	o						o	o	o
Subgelid.....[m <=0] (Pf)	o	o	o	o	o				o	o	o	o
Pregelid.....[m' <=0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
Agelid.....[m' > 0] (Pf)												
HiperAgelid..[all>0] (Pf)												

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.16
 Mediterranean index of July.[PE/P].....(Im1): 1.50
 Mediterranean index of July & August.....(Im2): 1.50
 Mediterranean index of June, July & August....(Im3): 1.44

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp (x10)	*	*	*	*	*	351	831	899	701	465	*	*
Tp	*	*	*	*	*	69	136	172	147	75	*	*
Io (Iom)	*	*	*	*	*	5.06	6.10	5.22	4.76	6.20	*	*
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	*/*			*/*			2431 / 456			*/*		
Io (Iot)	*			*			5.336			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3247/600=5.41 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	*	351	831	899	701	465	*	*
Tp [T*10]	*	*	*	*	*	69	136	172	147	75	*	*
Iom [Pp/Tp]	!!	!!	!!	!!	!!	506	610	522	476	620	!!	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			2431 / 456			* / *		
Iot [Pp/Tp]	**			**			534			**		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 46.11
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 76.82
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 73.41
 + Continental (60<CI<80)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 2.44
 + Hypercontinental (2.3<CI<5)
 Rainfall Index of Lang (1925) [R=P/T]: -82.29
 +
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 77.16
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]: -58.65
 +
 I of Dantin & Revenga (1940) [DR=100*T/P]: -1.22
 +
 Aridity Index of UNEP [I=P/PE]: 0.86
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 20.30
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: B. Cold and temperate cold
 + Region: 11. Psicroaxeric (Axeric cold)
 + Thermic type: 8. Ultramicrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.02	0.02	0.06	0.16	0.19	0.40	0.40	0.32	0.26	0.14	0.09	0.05
T-E ratio	0.00	0.00	0.00	0.00	3.12	6.13	7.75	6.62	3.38	0.00	0.00	0.00
Precipitation-effectiveness: 21.16						Temperature-efficiency: 27.00						
Moisture Index [MI=100*(P-PE)/PE]: -14.05 + C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]: 14.03 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 463.27 + Second microthermic (427<PE<570)												

