Rubalcava-Knoth, Marco A.

Cevallos-Ferriz, Sergio R. S.

Paleoclimate and Paleoecology of the Upper Oligocene Tehuacán of Formation, Puebla State, Mexico as determined from wood anatomical characters

Data matrix that includes the data generated by Martínez-Cabrera et al., (2008; *), the unpublished data generated by Castañeda-Posadas, (2008; **) and the data obtained in this work for the paleoflora of the Tehuacán Fm. The characters strongly related to some climatic variable (Martínez-Cabrera et al., 2008) are: (1) Growth rings, (2) Vessel grouping, (3) Vessel frequency, (4) Vessel diameter, (5) Vessel wall thickness, (6) Helical sculpture, (7) Intervascular pit aperture diameter, (8) Alternate intervessel pits, (9) Opposite intervessel pits, (10) Scalariform intervessel pits, (11) Simple perforation plates, (12) Scalariform perforation plates, (13) Fibre wall thickness, (14) Fibre lumen diameter, (15) Tracheids, (16) Fibrotracheids, (17) Libriform fibres, (18) Parenchyma diffuse in aggregates, (19) Vasicentric parenchyma, (20) Aliform parenchyma, (21) Apotracheal parenchyma bands, (22) Concentric parenchyma bands, (23) Marginal parenchyma, (24) Height of uniseriate ray μm, (25) Height of uniseriate ray (Nº cells), (26) Percentage of uniseriate rays, (27) Exclusively uniseriate rays, (28) Width of multiseriate ray (μm), (29) Width of multiseriate ray (Nº cells), (30) Length of uniseriate extensions (μm), (31) Length of uniseriate extensions (Nº cells), (32) Storied structure, (33) Heterocellular rays, (34) Homocellular rays.

APPENDIX 3

Character	Tropical deciduous forest*	Los Tuxtlas*	Porto Velho*	Tafelberg*	Manaus*	Mountain forest*	Tropical semi-deciduos forest**	Xeric shrubland**	El Cien*	Tehuacán Formation
1	0.89	0.509	0.6	0.6	0.36	0.77	0.3	0.667	0.727	0.608
2	1.88	1.787	1.564	1.548	1.648	1.66	1.65	2.566	1.487	1.746
3	32.7	13.16	13.58	13.89	9.49	34.7	11.638	37.116	16.24	10.5
4	87.56	120.85	104.57	90.88	107.55	75.63	143.691	101.674	126.67	171.342
5	5.42	3.997	4.46	4.477	4.99	3.139	6.077	5	5.524	9.716
6	0	0.54	0.04	0	0	0.259	0	0	0.045	0
7	6.75	7.31	4.52	3.41	4.43	7.528	8.024	6.512	5.846	6.136
8	1	0.945	0.96	1	1	0.704	1	0.977	1	0.892
9	0	0.018	0.08	0.04	0.04	0.259	0	0.023	0.091	0.107
10	0	0.054	0.04	0	0	0.259	0	0	0.045	0
11	1	0.96	0.96	0.96	0.92	0.629	1	0.977	1	1
12	0	0.072	0.16	0.04	0.12	0.55	0	0.023	0	0
13	3.84	3.2	4.54	4.616	5.256	4.538	5.204	133.826	3.038	3.63
14	15.7	21.83	8.45	8.61	8.818	25.75	10.59	15.174	9.012	9.314
15	0.16	0	0	0	0	22.2	0.292	0.8	0	0
16	0.048	0.054	0.12	0.08	0	0.407	0.4	0.279	0	0.0357
17	0.984	0.981	1	1	1	0.666	0.6	0.698	1	0.107
18	0.096	0.127	0.32	0.32	0.52	0.296	0.3	0.163	0.136	0
19	0.242	0.254	0.32	0.24	0.24	0.096	0.5	0.14	0.636	0.857
20	0.242	0.254	0.24	0.16	0.2	0.074	0	0.163	0.5	0.0714
21	0.145	0.218	0.52	0.76	0.64	0.037	0.4	0.558	0.227	0.285
22	0.032	0.072	0.04	0.04	0.08	0.037	0.2	0.047	0.045	0.785
23	0.354	0.2	0.24	0.2	0.16	0.118	0.6	0.233	0.273	0.142
24	107.1	207.57	245.57	296.16	281.036	251.41	371.309	270	204.99	74.357
25	4.21	7.48	5.3	6.42	6.286	5.857	9.593	5.4	6.934	2.097
26	0.806	0.963	0.92	0.96	0.96	1	0.9	0	0.954	0.429
27	0.129	0.073	0.24	0.24	0.2	0.037	0.1	0	0.182	0
28	39.36	50.35	26.99	37.81	40.3	60.435	37.966	7	36.199	56.352
29	2.93	3.78	2.36	2.64	2.72	4.67	2.693	1.5	2.682	2.458
30	51.59	103.36	84.59	85.78	77.36	160.46	46.322	86	71.26	0
31	1.588	2.361	1.66	1.83	2	2.837	1.486	2	1.99	0
32	0.29	0.091	0.08	0.04	0	0	0.3	0.2	0.045	0.428
33	0.516	0.8	0.8	0.88	0.84	0.778	0.4	0.764	0.591	0.643
34	0.5	0.218	0.2	0.12	0.2	0.222	0.5	0.27	0.409	0.357