Supplemental Table 1. Frequencies of dental morphological traits used in analysis for Central Mexico. Abbreviations for sites are the same as Figure 2.

Trait AZC CHO CUL HLA TEN TEO TGO TEX TLA XOC YAG ZAA

(-, +) (n) (n) (n) (n) (n) (n) (n) (n) (n) (n) (n) (n)

Shoveling 0.37 0.42 0.47 0.40 0.43 0.25 0.25 0.37 0.41 0.42 0.19 0.18

UI1 (27) (38) (17) (10) (14) (12) (16) (8) (39) (12) (21) (11)

(*1-3, 4-6*)

Shoveling 0.47 0.67 0.50 0.67 0.60 0.50 0.50 0.67 0.48 0.37 0.54 0.61

UI2 (30) (39) (20) (9) (15) (12) (16) (5) (44) (16) (22) (13)

(*1-3, 4-6*)

Double 0.69 0.74 0.67 0.60 0.71 0.58 0.62 0.60 0.63 0.75 0.66 0.54

Shovel UI1 (32) (38) (18) (10) (14) (12) (16) (5) (38) (12) (21) (11)

(0, 1-6)

**Tuberculum** 0.56 0.30 0.53 0.33 0.46 0.44 0.27 0.50 0.37 0.36 0.40 0.46

**Dentale UI2** (27) (30) (15) (9) (15) (9) (15) (5) (41) (14) (20) (13)

(0-1, 2-6)

**Distal Canine** 0.42 0.50 0.55 0.33 0.27 0.40 0.58 0.17 0.31 0.35 0.31 0.33

**Ridge UC** (12) (30) (12) (9) (11) (10) (12) (12) (35) (20) (13) (15)

(0-1, 2-5)

Metacone 0.63 0.47 0.48 0.82 0.68 0.90 0.43 0.68 0.65 0.61 0.89 0.83

UM1 (38) (51) (23) (17) (19) (21) (23) (19) (54) (31) (28) (18)

(0-4, 5-6)

Hypocone 0.70 0.49 0.71 0.88 0.89 0.95 0.54 0.84 0.83 0.87 0.89 0.89

UM1 (37) (51) (21) (17) (19) (21) (22) (19) (54) (31) (28) (18)

(0-4, 5-6)

Hypocone 0.73 0.70 0.74 0.81 0.47 0.52 0.70 0.61 0.80 0.69 0.64 0.74

UM2 (37) (43) (23) (16) (19) (23) (20) (18) (55) (29) (28) (19)

(0-1, 2-6)

Cusp 5 0.22 0.25 0.37 0.23 0.30 0.21 0.19 0.16 0.19 0.13 0.14 0.17

UM1 (36) (44) (19) (17) (20) (19) (21) (19) (53) (31) (28) (18)

(0, 1-5)

Carabelli’s 0.37 0.48 0.44 0.50 0.43 0.16 0.55 0.60 0.55 0.26 0.14 0.39

Cusp UM1 (24) (42) (18) (12) (14) (10) (20) (19) (49) (27) (25) (18)

(0, 1-7)

**Shoveling** 0.12 0.26 0.11 0.40 0.28 0.10 0.18 0.20 0.41 0.22 0.29 0.25

**LI2** (24) (43) (19) (15) (14) (10) (11) (5) (49) (18) (14) (10)

(*0-2, 3-4*)

Complexity 0.35 0.54 0.44 0.19 0.31 0.20 0.52 0.50 0.53 0.38 0.18 0.13

LP4 (37) (39) (27) (16) (16) (20) (21) (6) (55) (29) (27) (15)

(0-2, 3-9)

Protostylid 0.26 0.26 0.21 0.26 0.47 0.10 0.42 0.71 0.29 0.24 0.13 0.57

LM1 (38) (53) (24) (19) (17) (21) (24) (14) (62) (38) (30) (14)

(*0-1, 2-7*)

Cusp 5 0.49 0.41 0.58 0.45 0.50 0.38 0.50 0.38 0.62 0.47 0.41 0.44

LM2 (35) (46) (26) (20) (18) (21) (18) (13) (60) (34) (29) (16)

(0, 1-5)

Cusp 6 0.10 0.19 0.20 0.21 0.12 0.10 0.27 0.14 0.17 0.10 0.13 0.33

LM1 (38) (47) (25) (19) (17) (22) (22) (14) (63) (39) (30) (15)

(0, 1-5)

**Cusp 7** 0.03 0.04 0.04 0.05 0 0.04 0 0.14 0.11 0.07 0.03 0

**LM1** (40) (52) (26) (19) (18) (22) (25) (14) (65) (38) (30) (15)

(0, 1-4)

Note: Italicized breakpoints indicate adjusted breakpoints. Traits in bold were removed for non-metric multidimensional scaling.

Supplemental Table 2. Frequencies of dental morphological traits used in analysis for West Mexico, and Northern Mexico. Abbreviations for sites are the same as Figure 2.

Trait AUT CHA GUA HUE TZI ZAC PAQ CUA CAN NAR TAY

(-, +) (n) (n) (n) (n) (n) (n) (n) (n) (n) (n) (n)

Shoveling 0.40 0.43 0.38 0.33 0.40 0.44 0.59 0.80 0.75 0.57 0.67

UI1 (5) (7) (8) (6) (10) (9) (22) (5) (4) (7) (5)

(*1-3, 4-6*)

Shoveling 0.64 0.50 0.88 0.89 0.50 0.67 0.65 0.80 0.44 0.67 0.75

UI2 (6) (11) (8) (9) (10) (15) (22) (5) (4) (7) (8)

(*1-3, 4-6*)

Double 0.60 0.67 0.67 0.56 0.60 0.56 0.81 0.80 0.80 0.83 0.33

Shovel UI1 (5) (9) (9) (9) (10) (11) (21) (5) (5) (6) (6)

(0, 1-6)

**Tuberculum** 0.40 0.42 0.57 0.56 0.44 0.46 0.39 0.20 0.18 0.40 0.71

**Dentale UI2** (5) (12) (7) (9) (9) (13) (18) (5) (11) (5) (7)

(0-1, 2-6)

**Distal Canine** 0.67 0.38 0.25 0.25 0.29 0.19 0.37 0.60 0.67 0.30 0.67

**Ridge UC** (5) (8) (4) (4) (14) (16) (19) (5) (3) (10) (5)

(0-1, 2-5)

Metacone 0.86 0.59 0.36 0.33 0.81 0.82 0.48 0.70 0.50 0.60 0.27

UM1 (9) (17) (11) (12) (27) (39) (29) (10) (24) (20) (11)

(0-4, 5-6)

Hypocone 0.86 0.88 0.18 0.18 0.89 0.90 0.34 0.30 0.27 0.40 0.27

UM1 (9) (17) (11) (11) (27) (39) (29) (10) (22) (20) (11)

(0-4, 5-6)

Hypocone 0.43 0.88 0.88 0.82 0.88 0.78 0.74 0.38 0.75 0.88 0.83

UM2 (9) (17) (8) (11) (24) (37) (23) (8) (20) (16) (12)

(0-1, 2-6)

Cusp 5 0.14 0.29 0.71 0.67 0.15 0.23 0.14 0.30 0.38 0.32 0.30

UM1 (9) (17) (7) (9) (27) (39) (28) (10) (16) (19) (10)

(0, 1-5)

Carabelli’s 0.29 0.18 0.57 0.57 0.31 0.57 0.47 0.22 0.64 0.40 0.83

Cusp UM1 (9) (11) (7) (14) (26) (37) (17) (9) (11) (15) (6)

(0, 1-7)

**Shoveling** 0.25 0.24 0.50 0.36 0.27 0.47 0.55 0.20 0.33 0.33 0.83

**LI2** (4) (17) (6) (11) (15) (15) (11) (5) (6) (6) (6)

(*0-2, 3-4*)

Complexity 0.38 0.29 0.70 0.88 0.26 0.52 0.23 0.60 0.80 0.33 0.63

LP4 (8) (21) (10) (8) (31) (25) (22) (5) (10) (9) (8)

(0-2, 3-9)

Protostylid 0.29 0.24 0.71 0.57 0.24 0.72 0.77 0.56 0.75 0.55 0.71

LM1 (9) (21) (7) (7) (34) (29) (26) (9) (12) (11) (7)

(*0-1, 2-7*)

Cusp 5 0.29 0.38 0.44 0.38 0.41 0.35 0.50 0.27 0.38 0.64 0.75

LM2 (9) (21) (8) (8) (34) (26) (20) (11) (8) (11) (8)

(0, 1-5)

Cusp 6 0.38 0.19 0.25 0.20 0.32 0.14 0.14 0.33 0.17 0.25 0.44

LM1 (8) (21) (8) (5) (34) (29) (28) (9) (12) (12) (9)

(0, 1-5)

Cusp 7 0.25 0.20 0.33 0.25 0.06 0.07 0.04 0.01 0.21 0.10 0.11

LM1 (8) (10) (10) (8) (30) (0.29) (26) (10) (14) (10) (9)

(0, 1-4)

Note: Italicized breakpoints indicate adjusted breakpoints. Traits in bold were removed for non-metric multidimensional scaling.

Supplemental Table 3. Frequencies of dental morphological traits used in analysis for the Gulf Coast, and Maya region. Abbreviations for sites are the same as Figure 2.

Trait TAM VIS CHN CZL PLA COB TUL

(-, +) (n) (n) (n) (n) (n) (n) (n)

Shoveling 0.39 0.40 0.62 0.67 0.37 0.25 0.57

UI1 (18) (5) (13) (9) (16) (4) (7)

(*1-3, 4-6*)

Shoveling 0.69 0.64 0.64 0.64 0.37 0.50 0.75

UI2 (26) (14) (13) (9) (16) (4) (4)

(*1-3, 4-6*)

Double 0.43 0.40 0.47 0.58 0.50 0.50 0.87

Shovel UI1 (7) (5) (15) (12) (16) (4) (8)

(0, 1-6)

**Tuberculum** 0.30 0.31 0.30 0.33 0.12 0.50 0.33

**Dentale UI2** (20) (13) (10) (6) (16) (4) (6)

(0-1, 2-6)

**Distal Canine** 0.20 0.18 0.56 0.17 0.33 0.33 0.33

**Ridge UC** (20) (11) (9) (18) (18) (6) (6)

(0-1, 2-5)

Metacone 0.75 0.67 0.81 0.64 0.00 0.00 0.00

UM1 (32) (24) (16) (11) (22) (6) (9)

(0-4, 5-6)

Hypocone 0.78 0.79 0.81 0.82 0.27 0.16 0.22

UM1 (32) (24) (16) (17) (22) (6) (9)

(0-4, 5-6)

Hypocone 0.81 0.59 0.75 0.33 0.70 0.66 0.87

UM2 (31) (22) (16) (15) (20) (6) (8)

(0-1, 2-6)

Cusp 5 0.13 0.13 0.19 0.13 0.15 0.33 0.37

UM1 (32) (24) (16) (23) (20) (6) (8)

(0, 1-5)

Carabelli’s 0.37 0.57 0.21 0.21 0.30 0.83 0.33

Cusp UM1 (30) (21) (14) (24) (20) (6) (9)

(0, 1-7)

**Shoveling** 0.30 0.33 0.29 0.70 0.40 0.16 0.16

**LI2** (27) (15) (14) (30) (10) (6) (6)

(*0-2, 3-4*)

Complexity 0.50 0.46 0.35 0.77 0.36 0.12 0.29

LP4 (36) (24) (17) (26) (22) (8) (7)

(0-2, 3-9)

Protostylid 0.17 0.16 0.12 0.17 0.10 0.33 0.14

LM1 (36) (25) (17) (30) (20) (6) (7)

(*0-1, 2-7*)

Cusp 5 0.39 0.28 0.35 0.43 0.45 0.62 0.14

LM2 (36) (25) (17) (21) (22) (8) (7)

(0, 1-5)

Cusp 6 0.11 0.16 0.18 0.18 0.09 0.00 0.00

LM1 (37) (25) (17) (17) (21) (6) (7)

(0, 1-5)

**Cusp 7** 0.05 0.10 0.06 0.09 0.09 0.00 0.00

**LM1** (37) (12) (17) (20) (20) (8) (7)

(0, 1-4)

Note: Italicized breakpoints indicate adjusted breakpoints. Traits in bold were removed for non-metric multidimensional scaling.