**Supplementary Material**

Appendix 1. List of languages measured. Starred languages (Towa\*, Guarani\* and Southern Qiang\*) are included in data used in Figure 2, but not in the analysis of correlation of sonority and temperature in Figure 3. The table is ordered according to increasing sonority scores.

|  |  |  |  |
| --- | --- | --- | --- |
| **ISO 639-3** | **Language Name** | **Sonority score** | **Major family** |
| shs | Shuswap | 41.15 | Salishan |
| qui | Quileute | 43.79 | Chimakuan |
| kwk | Kwakw'ala | 46.70 | Wakashan |
| blc | Nuxalk (Bella Coola) | 48.14 | Salishan |
| khk | Khalkha | 48.26 | Altaic |
| jqr | Jaqaru | 48.32 | Aymaran |
| kal | W. Greenlandic Inuktitut | 50.00 | Eskimo-Aleut |
| hei | Heiltsuk | 51.35 | Wakashan |
| pbb | Paez | 52.59 | Isolate 1 |
| bul | Bulgarian | 52.82 | Indo-European |
| con | Cofan | 53.49 | Unclassified 1 |
| lui | Luiseño | 54.89 | Uto-Aztecan |
| hye | Armenian, Eastern | 56.24 | Indo-European |
| zun | Zuni | 56.44 | Isolate 2 |
| kbd | Kabardian | 56.48 | North-West Caucasian |
| kat | Georgian | 56.98 | Kartvelian |
| ybe | Saryg Yugur | 58.39 | Altaic |
| tob | Toba (Qom) | 58.61 | Mataco-Guaicuruan |
| lvs | Latvian | 59.29 | Indo-European |
| acr | Achí, Rabinal dialect | 59.61 | Mayan |
| arh | Ika (Colombia) | 60.04 | Chibchan |
| mzp | Movima | 60.11 | Unclassified 2 |
| yab | Yuhup | 60.40 | Nadahup |
| quh | Quechua, Cochabamba | 61.18 | Quechuan |
| bkk | Brokskat | 61.26 | Indo-European |
| gla | Scottish Gaelic | 61.31 | Indo-European |
| ess | Yupik, Central Siberian | 61.34 | Eskimo-Aleut |
| crk | Cree, Plains | 61.60 | Algic |
| kha | Khasi | 61.73 | Austro-Asiatic |
| lbj | Ladakhi | 61.74 | Sino-Tibetan |
| tyv | Tuva | 62.10 | Altaic |
| tsi | Tsimshian, Coast | 62.18 | Tsimshianic |
| roh | Romansch | 62.25 | Indo-European |
| ykg | Tundra Yukaghir | 62.29 | Uralic |
| qxs\* | Southern Qiang\* | 62.40 | Sino-Tibetan |
| bsk | Burushaski | 62.72 | Isolate 3 |
| kru | Kurukh | 63.02 | Dravidian |
| naq | Khoekhoe | 63.07 | Central Khoisan |
| eve | Even | 63.31 | Altaic |
| pqm | Passamaquoddy | 63.58 | Algic |
| apj | Jicarilla Apache | 63.63 | Na-Dene |
| bbc | Batak, Toba | 64.08 | Austronesian |
| nez | Nez Perce | 64.40 | Penutian |
| hop | Hopi | 64.68 | Uto-Aztecan |
| xsu | Sanuma | 64.70 | Yanomami |
| mjg | Mangghuer, Minxe dialect | 64.84 | Altaic |
| thd | Kuuk Thaayorre | 64.90 | Australian |
| grt | Garo | 65.64 | Sino-Tibetan |
| tzm | Tamazight, Central Atlas | 65.70 | Afro-Asiatic |
| sah | Yakut | 65.72 | Altaic |
| djc | Daju, Dar Daju dialect | 65.76 | Nilo-Saharan |
| amc | Amahuaca | 66.35 | Pano-Tacanan |
| pav | Wari' | 66.39 | Chapacuran |
| ckt | Chukchi | 66.80 | Chukchi-Kamchatkan |
| nas | Naasioi | 66.83 | East Papuan |
| miq | Miskitu | 66.85 | Misumalpan |
| tem | Themne | 66.95 | Niger-Congo |
| she | Sheko | 67.00 | Afro-Asiatic |
| tsz | Tarascan | 67.01 | Isolate 4 |
| gug\* | Guarani, Paraguayan\* | 67.04 | Tupian |
| ksw | Karen, Sgaw | 67.10 | Sino-Tibetan |
| taj | Tamang, Eastern | 67.53 | Sino-Tibetan |
| hmm | Manange | 67.89 | Sino-Tibetan |
| nmm | Manange | 67.89 | Sino-Tibetan |
| apu | Apuriná | 68.17 | Arawakan |
| dta | Dagur | 68.27 | Altaic |
| mig | Mixtec, Chalcatongo | 68.40 | Oto-Manguean |
| pon | Pohnpeian | 68.50 | Austronesian |
| khq | Koyra Chiini Songhay | 68.56 | Nilo-Saharan |
| mri | Maori | 69.10 | Austronesian |
| dgz | Daga | 69.20 | Trans-New Guinea |
| apn | Apinaye | 69.46 | Macro-Ge |
| fin | Finnish | 69.55 | Uralic |
| see | Seneca | 69.85 | Iroqoian |
| umb | UMbundu | 70.18 | Niger-Congo |
| amf | Hamer | 70.57 | Afro-Asiatic |
| brv | Bruu, Western | 71.18 | Austro-Asiatic |
| dru | Rukai, Tanan dialect | 71.34 | Austronesian |
| zul | IsiZulu | 71.77 | Niger-Congo |
| haw | Hawaiian | 71.84 | Austronesian |
| yer | Tarok | 72.44 | Niger-Congo |
| arn | Mapudungun | 72.49 | Isolate 5 |
| ekg | Ekari | 72.58 | Trans-New Guinea |
| wim | Wik-Munkan | 73.66 | Australian |
| cbi | Chachi | 73.73 | Barbacoan |
| wgi | Mid-Waghi | 73.75 | Trans-New Guinea |
| urb | Urubu-Kaapor | 74.28 | Tupian |
| mhu | Digaro | 74.72 | Sino-Tibetan |
| mhl | Mauwake | 75.20 | Trans-New Guinea |
| kpw | Kobon | 75.56 | Trans-New Guinea |
| efi | Efik | 76.23 | Niger-Congo |
| aer | Eastern Arrernte | 76.65 | Australian |
| bvr | Burarra | 76.65 | Australian |
| nna | Nyangumarta | 76.66 | Australian |
| kgo | Krongo | 76.87 | Kadu |
| tow\* | Towa\* | 76.90 | Kiowa-Tanoan |
| jig | Jingulu | 77.77 | Australian |
| hmt | Hamtai | 78.58 | Trans-New Guinea |
| caq | Car Nicobarese | 79.58 | Mon-Khmer |
| cub | Cubeo | 80.62 | Tucanoan |
| alh | Alawa | 85.94 | Australian |
| mpc | Mangarrayi | 86.36 | Australian |
| mph | Maung | 89.64 | Australian |