**Landscape changes decreases genetic diversity in** **the Pallas’ long-tongued bat**

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**Appendix S1 - Tables**

**Table S1.** Sampling location and number of individuals sampled (N) in each population of *Glossophaga soricina* in Brazilian Cerrado Biome.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Population** | **Locality** | **N** | **Latitude** | **Longitude** |
| 1 | Brasília - DF | 10 | -47.861939 | -15.855431 |
| 2 | P. N. Chapada dos Veadeiros - GO | 22 | -47.846806 | -14.204583 |
| 3 | P. E. Terra Ronca - GO | 10 | -46.300000 | -13.760000 |
| 4 | Floresta Nacional de Silvânia - GO | 14 | -48.651940 | -16.640000 |
| 5 | Dianápolis - Porto Franco - TO | 15 | -46.789300 | -11.814300 |
| 6 | Vianópolis - GO | 10 | -4.851611 | -16.748556 |
| 7 | E. E. Águas Emendadas - DF | 7 | -47.680000 | -15.580000 |
| 8 | P. N. Chapada Diamantina - BA | 10 | -41.250000 | -11.500000 |
| 9 | P. N. Grande Sertão Veredas - MG | 13 | -45.700000 | -15.150000 |
| 10 | P. N. Emas - GO | 18 | -52.998720 | -17.901900 |
| 11 | Diamantina - MG | 14 | -43.388556 | -18.271167 |
| 12 | Brasilândia de Minas - MG | 9 | -46.011111 | -17.010278 |
| 13 | Nova Xavantina - MT | 10 | -52.501028 | -14.835750 |
| 14 | E. E. Itirapina - SP | 9 | -47.816700 | -22.250000 |
| 15 | Pratânia - SP | 8 | -48.666111 | -22.808333 |
| 16 | Barro Alto - GO | 22 | -49.040000 | -15.086900 |
| 17 | Niquelândia - GO | 15 | -48.450000 | -14.450000 |
| 18 | Mambaí - GO | 12 | -46.079608 | -14.505009 |
|  | Total | 229 |  |  |

**Table S2.** Contemporary occurrence records (2.353) of *Glossophaga soricina* used in the ecological niche modeling (ENM). Lat. latitude. Long. longitude. in decimals degree.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lat** | **Long** |  | **Lat** | **Long** |  | **Lat** | **Long** |  | **Lat** | **Long** |
| -27.0000 | -55.0000 |  | -21.5869 | -48.0708 |  | -20.2580 | -40.2480 |  | -18.9439 | -46.9925 |
| -25.8175 | -48.5428 |  | -21.5833 | -47.8000 |  | -20.2111 | -50.9258 |  | -18.8472 | -40.3728 |
| -25.5839 | -49.6356 |  | -21.4608 | -49.9497 |  | -20.1006 | -40.5297 |  | -18.7300 | -39.8500 |
| -25.3067 | -48.3289 |  | -21.4600 | -47.0000 |  | -20.1000 | -40.5300 |  | -18.7166 | -40.4000 |
| -25.2590 | -57.0667 |  | -21.3667 | -49.6833 |  | -20.0000 | -40.1500 |  | -18.7161 | -39.8589 |
| -25.1333 | -47.9667 |  | -21.2667 | -49.4000 |  | -19.9356 | -40.6003 |  | -18.7106 | -40.4006 |
| -24.9744 | -49.0858 |  | -21.2000 | -49.2833 |  | -19.9333 | -40.1500 |  | -18.7100 | -40.3340 |
| -24.7300 | -48.1200 |  | -21.1783 | -47.8067 |  | -19.9167 | -40.6000 |  | -18.5933 | -39.7322 |
| -24.7081 | -47.5553 |  | -21.0761 | -49.5431 |  | -19.9167 | -40.6000 |  | -18.5069 | -54.7597 |
| -24.5300 | -56.8200 |  | -21.0667 | -41.4000 |  | -19.9167 | -40.6067 |  | -18.4500 | -63.1500 |
| -24.3333 | -47.6167 |  | -21.0642 | -41.3664 |  | -19.9166 | -40.2700 |  | -18.4167 | -39.7000 |
| -24.3200 | -47.6300 |  | -21.0428 | -49.3772 |  | -19.9166 | -40.6000 |  | -18.1800 | -59.3600 |
| -23.8167 | -45.4333 |  | -21.0167 | -50.7167 |  | -19.8333 | -40.3700 |  | -18.0583 | -59.0267 |
| -23.7744 | -45.3556 |  | -21.0166 | -40.8300 |  | -19.8319 | -40.3697 |  | -18.0000 | -64.2800 |
| -23.7744 | -45.3556 |  | -21.0158 | -49.4961 |  | -19.8203 | -40.2733 |  | -17.8833 | -63.1167 |
| -23.7703 | -45.3497 |  | -21.0111 | -40.8339 |  | -19.8166 | -40.2700 |  | -17.7833 | -63.1667 |
| -23.7000 | -46.5500 |  | -20.9133 | -49.7778 |  | -19.7897 | -42.1392 |  | -17.7833 | -63.1667 |
| -23.5919 | -48.0528 |  | -20.8833 | -47.6167 |  | -19.7628 | -44.3136 |  | -17.5500 | -63.5333 |
| -23.5503 | -46.6339 |  | -20.8225 | -49.9639 |  | -19.6621 | -39.7850 |  | -17.4700 | -63.1000 |
| -23.5403 | -46.6300 |  | -20.8197 | -49.3794 |  | -19.6347 | -43.8927 |  | -17.4667 | -63.7000 |
| -23.5228 | -46.1878 |  | -20.8189 | -49.5208 |  | -19.6333 | -43.8833 |  | -17.4333 | -60.9500 |
| -23.5017 | -47.4581 |  | -20.8167 | -48.9333 |  | -19.6272 | -43.8894 |  | -17.4167 | -63.1833 |
| -23.4439 | -46.9178 |  | -20.8081 | -49.3811 |  | -19.5189 | -41.0158 |  | -17.3833 | -63.2333 |
| -23.4303 | -45.0697 |  | -20.8000 | -52.0667 |  | -19.5166 | -41.0100 |  | -17.3833 | -63.2500 |
| -23.4167 | -57.1501 |  | -20.7889 | -48.3300 |  | -19.5136 | -43.7447 |  | -17.3500 | -63.7167 |
| -23.4167 | -46.6500 |  | -20.7853 | -49.8236 |  | -19.4733 | -39.9383 |  | -17.2300 | -63.1400 |
| -23.4167 | -45.1167 |  | -20.7725 | -49.7142 |  | -19.4167 | -39.8333 |  | -17.2167 | -64.7833 |
| -23.4167 | -45.1167 |  | -20.6942 | -50.0383 |  | -19.4167 | -40.0723 |  | -17.0708 | -71.7220 |
| -23.0903 | -47.2097 |  | -20.6767 | -50.1453 |  | -19.3911 | -40.0719 |  | -17.0667 | -71.7333 |
| -22.9000 | -47.0600 |  | -20.6667 | -40.4975 |  | -19.3911 | -40.0722 |  | -17.0667 | -71.7333 |
| -22.8800 | -48.4397 |  | -20.6666 | -40.5000 |  | -19.3167 | -64.3333 |  | -17.0600 | -64.4900 |
| -22.7250 | -47.6489 |  | -20.6567 | 49.3872 |  | -19.2826 | -40.3737 |  | -17.0000 | -63.5500 |
| -22.7150 | -47.8811 |  | -20.6383 | -51.1092 |  | -19.2000 | -57.9330 |  | -16.8050 | -49.9258 |
| -22.6564 | -52.8597 |  | -20.6333 | -40.5800 |  | -19.1866 | -40.0300 |  | -16.7500 | -57.7000 |
| -22.6558 | -43.8472 |  | -20.5386 | -47.4008 |  | -19.1733 | -39.9400 |  | -16.6000 | -62.6800 |
| -22.6139 | -45.1758 |  | -20.5061 | -47.7806 |  | -19.1644 | -40.0200 |  | -16.5833 | -62.4167 |
| -22.6003 | -46.9097 |  | -20.4778 | -49.7778 |  | -19.1533 | -40.0100 |  | -16.4000 | -62.4200 |
| -22.4833 | -48.5333 |  | -20.4228 | -49.9728 |  | -19.1500 | -57.6333 |  | -16.3600 | -62.4200 |
| -22.2803 | -48.1197 |  | -20.3906 | -40.4961 |  | -19.1400 | -39.7200 |  | -16.3500 | -62.2500 |
| -22.1928 | -48.7789 |  | -20.3370 | -40.3088 |  | -19.1011 | -40.0400 |  | -16.3400 | -62.2500 |
| -21.9961 | -47.4258 |  | -20.3297 | -40.2922 |  | -19.0966 | -40.0100 |  | -16.1500 | -67.7333 |
| -21.9928 | -48.3908 |  | -20.3297 | -40.2925 |  | -19.0431 | -39.9444 |  | -16.0800 | -67.4400 |
| -21.8300 | -48.4900 |  | -20.3194 | -40.3378 |  | -18.9970 | -40.0162 |  | -16.0667 | -61.5667 |
| -21.7633 | -52.1156 |  | -20.3166 | -40.3500 |  | -18.9900 | -40.1400 |  | -16.0093 | -47.9167 |
| -21.5956 | -46.8886 |  | -20.2766 | -40.3800 |  | -18.9458 | -46.6736 |  | -15.4667 | -67.5500 |
| -15.4600 | -67.3600 |  | -13.0667 | -64.8167 |  | -9.5092 | -80.3603 |  | -5.8415 | -79.7833 |
| -15.4400 | -67.3100 |  | -13.0631 | -72.4537 |  | -9.4061 | -38.2144 |  | -5.8234 | -79.7242 |
| -15.3167 | -67.4833 |  | -12.9686 | -68.6833 |  | -9.3320 | -76.0155 |  | -5.8234 | -79.7562 |
| -15.2833 | -67.0667 |  | -12.9550 | -68.9130 |  | -9.3192 | -76.0026 |  | -5.8144 | -79.8782 |
| -15.1700 | -67.0400 |  | -12.9333 | -71.2500 |  | -9.3000 | -75.9833 |  | -5.7843 | -79.4723 |
| -15.1106 | -66.9486 |  | -12.9000 | -71.2000 |  | -9.2872 | -75.9705 |  | -5.7833 | -78.4333 |
| -14.8667 | -67.1167 |  | -12.9000 | -72.5333 |  | -9.2800 | -74.4600 |  | -5.7000 | -78.6000 |
| -14.8500 | -66.3500 |  | -12.8500 | -51.7670 |  | -9.1000 | -45.7833 |  | -5.6833 | -80.7667 |
| -14.8361 | -56.4275 |  | -12.8380 | -69.2950 |  | -9.0762 | -75.7581 |  | -5.6716 | -78.6159 |
| -14.8333 | -64.9000 |  | -12.7333 | -73.7667 |  | -9.0156 | -42.6992 |  | -5.5855 | -79.5860 |
| -14.7889 | -39.0494 |  | -12.6639 | -68.7417 |  | -8.8753 | -72.7819 |  | -5.5607 | -79.7100 |
| -14.7889 | -39.0494 |  | -12.6580 | -68.7380 |  | -8.8603 | -72.8722 |  | -5.4154 | -78.4963 |
| -14.7833 | -67.0667 |  | -12.6000 | -69.0500 |  | -8.7667 | -63.9000 |  | -5.3333 | -78.6333 |
| -14.7833 | -64.7833 |  | -12.6000 | -69.0729 |  | -8.4053 | -72.8578 |  | -5.3167 | -79.8000 |
| -14.6384 | -52.4936 |  | -12.5667 | -69.2000 |  | -8.3833 | -74.5333 |  | -5.2000 | -78.3667 |
| -14.6374 | -52.4921 |  | -12.5333 | -38.7167 |  | -8.3578 | -74.5590 |  | -5.0994 | -78.8917 |
| -14.6292 | -60.7500 |  | -12.3333 | -70.9667 |  | -8.2808 | -73.2536 |  | -5.0842 | -81.1106 |
| -14.6218 | -52.4918 |  | -12.3333 | -72.8333 |  | -8.2500 | -74.7167 |  | -4.8443 | -78.1222 |
| -14.5675 | -60.8783 |  | -12.2167 | -68.4000 |  | -7.8333 | -79.1500 |  | -4.8333 | -40.9167 |
| -14.5675 | -60.8917 |  | -12.1167 | -76.9667 |  | -7.6311 | -72.6697 |  | -4.8333 | -74.2167 |
| -14.5667 | -60.8667 |  | -11.9833 | -76.8333 |  | -7.5567 | -73.2767 |  | -4.5667 | -81.2833 |
| -14.5500 | -60.8800 |  | -11.8428 | -48.6356 |  | -7.5167 | -39.7167 |  | -4.5664 | -81.1589 |
| -14.5400 | -64.2200 |  | -11.8428 | -48.6356 |  | -7.4467 | -73.6161 |  | -4.4700 | -78.1700 |
| -14.5400 | -64.5800 |  | -11.8428 | -48.6356 |  | -7.4467 | -73.6781 |  | -4.4589 | -81.0461 |
| -14.5333 | -60.8833 |  | -11.7500 | -38.9167 |  | -7.2167 | -35.8833 |  | -4.4500 | -71.7833 |
| -14.5100 | -66.1700 |  | -11.7333 | -66.7833 |  | -7.2167 | -35.8833 |  | -4.4492 | -81.1610 |
| -14.4500 | -61.0100 |  | -11.4400 | -66.4700 |  | -7.0833 | -36.3500 |  | -4.2761 | -55.9833 |
| -14.3800 | -60.4500 |  | -11.4333 | -67.5667 |  | -7.0285 | -79.6800 |  | -4.2333 | -79.2500 |
| -14.3400 | -60.5300 |  | -11.3500 | -74.0400 |  | -6.8627 | -47.5439 |  | -4.1083 | -81.0158 |
| -14.3300 | -60.5400 |  | -11.3000 | -75.3333 |  | -6.8500 | -79.0667 |  | -4.1000 | -78.3830 |
| -14.2500 | -51.6167 |  | -11.2700 | -74.5100 |  | -6.8333 | -77.8062 |  | -4.0950 | -78.3933 |
| -14.2500 | -65.8300 |  | -11.2667 | -74.6833 |  | -6.8333 | -77.8333 |  | -4.0500 | -77.7667 |
| -13.9167 | -67.3833 |  | -11.1700 | -74.1600 |  | -6.8333 | -78.0167 |  | -3.9283 | -41.7092 |
| -13.9075 | -60.8147 |  | -11.1500 | -74.3167 |  | -6.8333 | -78.0167 |  | -3.8544 | -40.9211 |
| -13.8575 | -40.0836 |  | -11.0500 | -66.0833 |  | -6.7131 | -47.7597 |  | -3.8535 | -80.2806 |
| -13.7701 | -48.7432 |  | -11.0500 | -75.3167 |  | -6.6500 | -79.4000 |  | -3.8333 | -52.6667 |
| -13.5300 | -71.9900 |  | -11.0333 | -45.5333 |  | -6.5333 | -80.0167 |  | -3.8000 | -80.5167 |
| -13.4548 | -57.2668 |  | -11.0100 | -66.0600 |  | -6.4813 | -47.5295 |  | -3.7481 | -73.2472 |
| -13.3500 | -63.7500 |  | -11.0100 | -66.1200 |  | -6.2535 | -79.7055 |  | -3.7167 | -80.7000 |
| -13.3500 | -73.8667 |  | -11.0000 | -44.5333 |  | -6.2000 | -79.6833 |  | -3.7000 | -71.4833 |
| -13.3333 | -64.1333 |  | -10.9567 | -66.8333 |  | -6.1500 | -79.7333 |  | -3.6844 | -42.7503 |
| -13.1500 | -67.1800 |  | -10.9500 | -66.0500 |  | -6.1289 | -79.0572 |  | -3.6500 | -41.6000 |
| -13.1472 | -69.6111 |  | -10.7833 | -75.2167 |  | -6.0500 | -76.9667 |  | -3.6500 | -52.3670 |
| -13.1420 | -69.6070 |  | -10.7670 | -66.7330 |  | -5.9833 | -79.7667 |  | -3.6333 | -52.3667 |
| -13.1306 | -50.8312 |  | -10.6670 | -66.8500 |  | -5.9517 | -79.7667 |  | -3.5667 | -80.4667 |
| -13.1272 | -51.1096 |  | -10.5700 | -66.0300 |  | -5.8822 | -79.7833 |  | -3.4833 | -80.3833 |
| -13.1167 | -64.8500 |  | -10.0365 | -75.2717 |  | -5.8498 | -79.8248 |  | -3.4833 | -80.3383 |
| -13.0833 | -76.4000 |  | -9.5167 | -77.8833 |  | -5.8473 | -78.3695 |  | -3.1990 | -72.7062 |
| -2.9830 | -79.0000 |  | 3.3885 | -73.9547 |  | 5.6167 | -55.2000 |  | 8.6000 | -80.1333 |
| -2.9830 | -79.6330 |  | 3.4057 | -73.9484 |  | 5.6670 | -57.8644 |  | 8.6000 | -80.1500 |
| -2.9830 | -79.7830 |  | 3.4931 | -73.8750 |  | 5.8292 | -74.3486 |  | 8.6395 | -82.9583 |
| -2.9500 | -44.2333 |  | 3.6100 | -53.2100 |  | 5.8297 | -74.3326 |  | 8.6655 | -82.9378 |
| -2.6833 | -49.6833 |  | 3.6455 | -75.5943 |  | 5.8333 | -55.1667 |  | 8.6670 | -77.4330 |
| -2.6333 | -54.9667 |  | 3.6500 | -65.7670 |  | 5.8480 | -74.3372 |  | 8.6670 | -77.4500 |
| -2.5800 | -76.1100 |  | 3.6500 | -75.4500 |  | 5.8539 | -74.3182 |  | 8.6900 | -83.4900 |
| -2.4333 | -54.7000 |  | 3.6642 | -75.1079 |  | 5.8635 | -74.3245 |  | 8.6927 | -83.4833 |
| -2.2500 | -49.5000 |  | 3.7167 | -65.8000 |  | 5.9182 | -74.7222 |  | 8.6975 | -83.4873 |
| -2.1833 | -56.7333 |  | 3.8797 | -76.4428 |  | 5.9830 | -61.4330 |  | 8.7000 | -77.5330 |
| -2.1765 | -79.7285 |  | 3.8997 | -77.0338 |  | 6.0333 | -75.4333 |  | 8.7800 | -82.9700 |
| -2.1670 | -80.0330 |  | 3.9654 | -73.0502 |  | 6.0914 | -74.7534 |  | 8.7972 | -82.9667 |
| -1.9500 | -79.7333 |  | 4.0000 | -52.6670 |  | 6.1731 | -75.5639 |  | 8.8170 | -67.3670 |
| -1.8170 | -79.5170 |  | 4.0000 | -72.0000 |  | 6.1747 | -73.4496 |  | 8.8330 | -70.5000 |
| -1.7113 | -79.4500 |  | 4.0183 | -71.1217 |  | 6.2000 | -67.4500 |  | 8.8638 | -83.3465 |
| -1.5830 | -79.4670 |  | 4.0300 | -74.9696 |  | 6.2167 | -67.4667 |  | 8.8670 | -67.3830 |
| -1.5670 | -80.7170 |  | 4.0813 | -74.9786 |  | 6.2830 | -61.3170 |  | 8.9000 | -83.0333 |
| -1.5500 | -79.4670 |  | 4.1033 | -72.9134 |  | 6.3170 | -61.3170 |  | 8.9454 | -83.5452 |
| -1.5170 | -75.6000 |  | 4.1285 | -74.5375 |  | 6.3830 | -58.7000 |  | 8.9500 | -79.6170 |
| -1.5000 | -79.4330 |  | 4.1533 | -73.6350 |  | 6.4346 | -74.3692 |  | 8.9667 | -79.5500 |
| -1.4500 | -48.4800 |  | 4.1664 | -74.5199 |  | 6.4354 | -74.3691 |  | 9.0167 | -79.5561 |
| -1.4500 | -48.4833 |  | 4.2401 | -74.5760 |  | 6.4963 | -75.9113 |  | 9.1167 | -79.6167 |
| -1.4000 | -61.8500 |  | 4.2918 | -73.5894 |  | 6.7833 | -58.0333 |  | 9.1500 | -79.8400 |
| -1.3833 | -80.7500 |  | 4.3330 | -61.7670 |  | 6.8000 | -58.1667 |  | 9.1670 | -82.0330 |
| -1.3000 | -48.4833 |  | 4.3938 | -75.7483 |  | 6.8170 | -63.4830 |  | 9.1830 | -72.7000 |
| -1.1306 | -79.4330 |  | 4.4170 | -61.5830 |  | 7.0000 | -62.2500 |  | 9.2000 | -72.6330 |
| -1.0330 | -79.4500 |  | 4.5500 | -61.4170 |  | 7.2775 | -71.9186 |  | 9.2170 | -72.5670 |
| -0.4000 | -76.6167 |  | 4.5847 | -74.9494 |  | 7.3170 | -71.9500 |  | 9.2200 | -80.0200 |
| -0.0533 | -76.3222 |  | 4.6300 | -58.7100 |  | 7.3706 | -60.4911 |  | 9.2254 | -74.7372 |
| 0.0500 | -78.2330 |  | 4.7300 | -58.8500 |  | 7.3714 | -60.4958 |  | 9.2500 | -83.8667 |
| 0.0742 | -72.4514 |  | 4.7500 | -59.0100 |  | 7.5000 | -65.7830 |  | 9.2536 | -83.5326 |
| 0.0800 | -76.9800 |  | 4.8926 | -74.5551 |  | 7.5170 | -78.1670 |  | 9.2575 | -83.6178 |
| 0.0840 | -76.9890 |  | 4.9667 | -74.4333 |  | 7.5258 | -65.8475 |  | 9.3170 | -62.9330 |
| 0.1589 | -72.6256 |  | 5.1000 | -67.7500 |  | 7.7500 | -68.8300 |  | 9.3170 | -82.1670 |
| 0.3670 | -80.0330 |  | 5.1330 | -66.2670 |  | 7.8314 | -76.8374 |  | 9.3833 | -83.7000 |
| 0.4333 | -72.5083 |  | 5.2339 | -75.6853 |  | 7.9000 | -72.5167 |  | 9.5143 | -83.7000 |
| 1.4667 | -66.4833 |  | 5.2439 | -67.7950 |  | 7.9563 | -76.6034 |  | 9.5170 | -70.5830 |
| 2.1933 | -68.1933 |  | 5.2667 | -58.0833 |  | 8.0167 | -61.6417 |  | 9.5330 | -70.6330 |
| 2.2017 | -68.1700 |  | 5.3000 | -66.2170 |  | 8.0333 | -72.2667 |  | 9.5330 | -70.6670 |
| 2.6667 | -77.2000 |  | 5.3500 | -66.1830 |  | 8.1000 | -76.7167 |  | 9.5331 | -84.5000 |
| 3.1500 | -65.8333 |  | 5.3500 | -66.1000 |  | 8.1300 | -77.7100 |  | 9.5700 | -85.1300 |
| 3.1670 | -65.8170 |  | 5.3503 | -75.0397 |  | 8.1367 | -74.5667 |  | 9.5856 | -84.1500 |
| 3.2500 | -59.2500 |  | 5.3830 | -66.1000 |  | 8.1670 | -72.1670 |  | 9.6000 | -82.7830 |
| 3.2705 | -73.8990 |  | 5.4000 | -55.1833 |  | 8.1833 | -77.6833 |  | 9.7167 | -83.0500 |
| 3.3204 | -73.4441 |  | 5.4000 | -67.6500 |  | 8.2833 | -75.6833 |  | 9.7300 | -63.4600 |
| 3.3333 | -75.1833 |  | 5.4500 | -67.6170 |  | 8.5000 | -82.5667 |  | 9.7333 | -82.9667 |
| 3.3762 | -73.9377 |  | 5.4823 | -74.9085 |  | 8.5500 | -83.5000 |  | 9.7438 | -85.0333 |
| 3.3833 | -76.4667 |  | 5.5500 | -67.6000 |  | 8.5667 | -67.5833 |  | 9.7667 | -83.7667 |
| 9.7833 | -84.8000 |  | 10.1333 | -61.5000 |  | 10.4600 | -64.1600 |  | 11.0170 | -63.9500 |
| 9.7972 | -83.8895 |  | 10.1333 | -83.3667 |  | 10.4667 | -84.0240 |  | 11.1170 | -70.7670 |
| 9.8000 | -83.8500 |  | 10.1391 | -61.5078 |  | 10.4667 | -85.1333 |  | 11.1317 | -74.1160 |
| 9.8209 | -84.5984 |  | 10.1500 | -83.7000 |  | 10.4670 | -70.8000 |  | 11.1330 | -68.6330 |
| 9.8300 | -83.9000 |  | 10.1667 | -84.8667 |  | 10.4800 | -63.5500 |  | 11.1670 | -70.6170 |
| 9.8500 | -69.7170 |  | 10.1667 | -85.0833 |  | 10.4830 | -66.2670 |  | 11.2000 | -68.6170 |
| 9.8513 | -84.0923 |  | 10.1800 | -63.1200 |  | 10.4830 | -68.3170 |  | 11.2500 | -73.6833 |
| 9.8600 | -83.6500 |  | 10.2000 | -63.5330 |  | 10.4986 | -84.9990 |  | 11.2667 | -73.8441 |
| 9.8667 | -66.9000 |  | 10.2100 | -83.7700 |  | 10.5000 | -61.2500 |  | 11.2700 | -85.8400 |
| 9.8800 | -83.9800 |  | 10.2167 | -83.7667 |  | 10.5229 | -85.7167 |  | 11.2800 | -85.8300 |
| 9.8833 | -85.5333 |  | 10.2330 | -68.2000 |  | 10.5300 | -61.3100 |  | 11.2900 | -85.8200 |
| 9.9000 | -83.6500 |  | 10.2333 | -85.5000 |  | 10.5330 | -68.3830 |  | 11.2999 | -73.9115 |
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| 9.9000 | -83.6833 |  | 10.2667 | -61.2667 |  | 10.5500 | -84.9000 |  | 11.3000 | -85.8100 |
| 9.9000 | -83.7127 |  | 10.2830 | -67.6000 |  | 10.5500 | -85.7000 |  | 11.3012 | -73.9292 |
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| 9.9100 | -63.0800 |  | 10.3000 | -65.8830 |  | 10.5500 | -85.7167 |  | 11.3100 | -85.7000 |
| 9.9167 | -63.1500 |  | 10.3000 | -84.8100 |  | 10.5520 | -85.4333 |  | 11.3178 | -73.9479 |
| 9.9167 | -84.1333 |  | 10.3133 | -84.4746 |  | 10.5667 | -61.2667 |  | 11.3213 | -74.0529 |
| 9.9167 | -83.7093 |  | 10.3170 | -65.9670 |  | 10.5830 | -68.2500 |  | 11.3300 | -85.8000 |
| 9.9300 | -84.0300 |  | 10.3330 | -65.9000 |  | 10.5859 | -61.1141 |  | 11.4800 | -85.6000 |
| 9.9300 | -84.0800 |  | 10.3333 | -85.2000 |  | 10.6000 | -61.3800 |  | 11.5300 | -85.6200 |
| 9.9333 | -84.1980 |  | 10.3333 | -61.2667 |  | 10.6167 | -61.4167 |  | 11.5300 | -85.6300 |
| 9.9333 | -84.1333 |  | 10.3400 | -64.0300 |  | 10.6167 | -61.2167 |  | 11.5300 | -85.7000 |
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| 9.9397 | -84.1898 |  | 10.3500 | -67.6670 |  | 10.6200 | -61.3500 |  | 11.7000 | -86.0500 |
| 9.9433 | -84.0600 |  | 10.3500 | -85.3500 |  | 10.6253 | -74.2959 |  | 11.8100 | -85.9800 |
| 9.9436 | -84.0937 |  | 10.3600 | -61.4000 |  | 10.6330 | -62.2500 |  | 11.8800 | -86.2700 |
| 9.9493 | -84.7231 |  | 10.3667 | -84.5333 |  | 10.6500 | -61.5100 |  | 11.8900 | -86.2500 |
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| 9.9908 | -84.7118 |  | 10.4000 | -85.0167 |  | 10.7000 | -85.4600 |  | 12.1100 | -86.3500 |
| 10.0089 | -84.7118 |  | 10.4167 | -61.4167 |  | 10.7167 | -61.2500 |  | 12.1400 | -86.1600 |
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| 10.0333 | -83.7667 |  | 10.4167 | -85.2000 |  | 10.7800 | -61.3800 |  | 12.1700 | -84.3100 |
| 10.0461 | -84.1038 |  | 10.4170 | -68.9000 |  | 10.8336 | -85.6100 |  | 12.1700 | -86.1100 |
| 10.0500 | -66.4500 |  | 10.4330 | -64.0330 |  | 10.8340 | -85.6145 |  | 12.2800 | -86.5300 |
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| 10.0800 | -61.2800 |  | 10.4400 | -64.1400 |  | 10.8500 | -72.2670 |  | 12.3700 | -85.6700 |
| 10.0900 | -61.8600 |  | 10.4400 | -83.7700 |  | 10.8806 | -85.3892 |  | 12.3700 | -87.0100 |
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| 12.6600 | -86.9500 |  | 14.0667 | -86.3667 |  | 15.5578 | -93.0661 |  | 15.9490 | -91.8260 |
| 12.6700 | -85.7400 |  | 14.1500 | -90.9667 |  | 15.5667 | -89.9667 |  | 15.9500 | -93.6530 |
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| 13.0200 | -87.5600 |  | 14.5833 | -88.5833 |  | 15.7040 | -96.2920 |  | 15.9660 | -97.1690 |
| 13.2500 | -88.1667 |  | 14.6342 | -88.5833 |  | 15.7180 | -96.3060 |  | 15.9660 | -97.6880 |
| 13.2667 | -88.3833 |  | 14.7950 | -90.1922 |  | 15.7220 | -93.3320 |  | 15.9692 | -93.7550 |
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| 16.7780 | -93.1420 |  | 16.8690 | -93.2740 |  | 16.9672 | -97.9292 |  | 17.1353 | -95.0417 |
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| 18.9280 | -103.0000 |  | 19.1400 | -104.5500 |  | 19.3036 | -104.7837 |  | 19.4250 | -104.0231 |
| 18.9300 | -90.7200 |  | 19.1488 | -104.1488 |  | 19.3051 | -103.6388 |  | 19.4333 | -103.7595 |
| 18.9333 | -104.0027 |  | 19.1667 | -103.8611 |  | 19.3153 | -103.9342 |  | 19.4500 | -89.7300 |
| 18.9333 | -104.0094 |  | 19.1667 | -103.9308 |  | 19.3167 | -103.6410 |  | 19.4560 | -105.0290 |
| 18.9360 | -98.9700 |  | 19.1667 | -104.1660 |  | 19.3180 | -96.7590 |  | 19.4580 | -89.7290 |
| 18.9420 | -90.5050 |  | 19.1667 | -104.1931 |  | 19.3180 | -96.7710 |  | 19.4600 | -96.9850 |
| 18.9472 | -103.8620 |  | 19.1670 | -103.8610 |  | 19.3200 | -96.7800 |  | 19.4994 | -105.0535 |
| 18.9472 | -103.8715 |  | 19.1700 | -100.1869 |  | 19.3203 | -103.7600 |  | 19.5000 | -105.0300 |
| 18.9472 | -103.9000 |  | 19.1708 | -103.8614 |  | 19.3208 | -103.6069 |  | 19.5000 | -105.0500 |
| 18.9486 | -104.0331 |  | 19.1710 | -103.8610 |  | 19.3210 | -103.6070 |  | 19.5000 | -105.0600 |
| 18.9497 | -97.1036 |  | 19.1728 | -104.5842 |  | 19.3260 | -96.7940 |  | 19.5040 | -104.9467 |
| 18.9554 | -103.9496 |  | 19.1750 | -96.9860 |  | 19.3269 | -96.4833 |  | 19.5080 | -96.6250 |
| 18.9647 | -103.4936 |  | 19.1833 | -104.1067 |  | 19.3270 | -96.4830 |  | 19.5090 | -96.9400 |
| 18.9667 | -104.0263 |  | 19.1833 | -104.3120 |  | 19.3270 | -96.7290 |  | 19.5120 | -96.5100 |
| 18.9740 | -99.2490 |  | 19.1833 | -104.3500 |  | 19.3280 | -96.7580 |  | 19.5125 | -96.5100 |
| 18.9744 | -99.2489 |  | 19.1853 | -104.0980 |  | 19.3280 | -96.7780 |  | 19.5136 | -105.0619 |
| 18.9851 | -103.9512 |  | 19.1865 | -104.0966 |  | 19.3300 | -104.6500 |  | 19.5189 | -105.0825 |
| 18.9992 | -98.9811 |  | 19.1903 | -103.8246 |  | 19.3300 | -104.7300 |  | 19.5190 | -105.0820 |
| 19.0008 | -98.9811 |  | 19.1923 | -104.1514 |  | 19.3320 | -96.7360 |  | 19.5200 | -105.0800 |
| 19.0010 | -98.9810 |  | 19.1940 | -99.3780 |  | 19.3331 | -103.7728 |  | 19.5250 | -105.0750 |
| 19.0248 | -103.7306 |  | 19.1962 | -104.3452 |  | 19.3390 | -96.7740 |  | 19.5267 | -105.0098 |
| 19.0347 | -103.7739 |  | 19.1972 | -103.8111 |  | 19.3420 | -96.7690 |  | 19.5267 | -105.0731 |
| 19.0610 | -98.8360 |  | 19.1986 | -104.5167 |  | 19.3440 | -96.7880 |  | 19.5284 | -105.0299 |
| 19.0783 | -103.7650 |  | 19.1990 | -100.1230 |  | 19.3450 | -96.7540 |  | 19.5290 | -105.0710 |
| 19.0800 | -104.3500 |  | 19.2000 | -96.3600 |  | 19.3470 | -96.7670 |  | 19.5292 | -105.0708 |
| 19.0808 | -103.7132 |  | 19.2020 | -98.8700 |  | 19.3533 | -104.7144 |  | 19.5326 | -105.0024 |
| 19.0917 | -96.1017 |  | 19.2075 | -104.1519 |  | 19.3542 | -103.5337 |  | 19.5390 | -96.6870 |
| 19.0920 | -96.1020 |  | 19.2097 | -90.8594 |  | 19.3606 | -103.5461 |  | 19.5400 | -104.5200 |
| 19.0970 | -88.4800 |  | 19.2100 | -90.8590 |  | 19.3667 | -103.6000 |  | 19.5550 | -105.0770 |
| 19.1000 | -96.1000 |  | 19.2118 | -103.8111 |  | 19.3700 | -103.0100 |  | 19.5560 | -105.0720 |
| 19.1004 | -103.8333 |  | 19.2300 | -99.0300 |  | 19.3754 | -103.2551 |  | 19.5617 | -103.6067 |
| 19.1008 | -96.1072 |  | 19.2327 | -103.9634 |  | 19.3800 | -103.3200 |  | 19.5680 | -105.0740 |
| 19.1010 | -96.1070 |  | 19.2386 | -104.4956 |  | 19.3800 | -104.9600 |  | 19.5700 | -104.2800 |
| 19.1080 | -103.7330 |  | 19.2431 | -103.7306 |  | 19.3850 | -104.9683 |  | 19.5790 | -90.3920 |
| 19.1083 | -103.7333 |  | 19.2519 | -103.3786 |  | 19.3850 | -96.9620 |  | 19.5794 | -90.3925 |
| 19.1100 | -104.3900 |  | 19.2608 | -103.9431 |  | 19.3880 | -105.0230 |  | 19.5870 | -90.3930 |
| 19.1164 | -102.0614 |  | 19.2680 | -100.2630 |  | 19.3890 | -105.0110 |  | 19.5872 | -90.3928 |
| 19.1221 | -103.4865 |  | 19.2700 | -90.7500 |  | 19.3900 | -104.9700 |  | 19.5897 | -96.3803 |
| 19.5899 | -96.3803 |  | 20.0456 | -97.4806 |  | 20.3700 | -105.1300 |  | 20.7240 | -89.4740 |
| 19.5900 | -103.9100 |  | 20.0460 | -97.4810 |  | 20.3864 | -89.3903 |  | 20.7300 | -103.8200 |
| 19.5900 | -88.0400 |  | 20.0578 | -97.4500 |  | 20.4200 | -86.8700 |  | 20.7371 | -103.8255 |
| 19.5900 | -96.3800 |  | 20.0580 | -97.4500 |  | 20.4290 | -103.0490 |  | 20.7395 | -104.0953 |
| 19.5960 | -88.0460 |  | 20.0597 | -97.5542 |  | 20.4400 | -97.1100 |  | 20.7705 | -105.5392 |
| 19.6060 | -88.0220 |  | 20.0600 | -97.5540 |  | 20.4490 | -97.0570 |  | 20.7890 | -97.4710 |
| 19.6100 | -88.0300 |  | 20.0610 | -97.4420 |  | 20.4698 | -104.2354 |  | 20.8000 | -103.3400 |
| 19.6500 | -104.4800 |  | 20.0611 | -97.4417 |  | 20.4750 | -87.2620 |  | 20.8056 | -97.7361 |
| 19.6700 | -105.1800 |  | 20.0640 | -87.5930 |  | 20.4797 | -97.0100 |  | 20.8060 | -97.7360 |
| 19.7260 | -96.4130 |  | 20.0690 | -97.6210 |  | 20.4800 | -97.0100 |  | 20.8197 | 49.3794 |
| 19.7370 | -90.2310 |  | 20.0694 | -97.6208 |  | 20.4910 | -88.5340 |  | 20.8200 | -103.3400 |
| 19.7372 | -90.2308 |  | 20.0747 | -97.6208 |  | 20.4944 | -97.2119 |  | 20.8550 | -89.2020 |
| 19.7500 | -89.8200 |  | 20.0750 | -97.6210 |  | 20.4990 | -103.1450 |  | 20.8553 | -89.2019 |
| 19.7570 | -89.8210 |  | 20.0817 | -97.4011 |  | 20.5056 | -97.6667 |  | 20.8680 | -86.8910 |
| 19.7680 | -104.3620 |  | 20.0820 | -97.4010 |  | 20.5060 | -97.6670 |  | 20.8770 | -89.6230 |
| 19.7681 | -104.3625 |  | 20.0890 | -89.0670 |  | 20.5100 | -97.3900 |  | 20.8900 | -97.5300 |
| 19.7700 | -96.4310 |  | 20.1028 | -97.6861 |  | 20.5347 | -89.9128 |  | 20.9100 | -103.9500 |
| 19.7800 | -104.7600 |  | 20.1030 | -97.6860 |  | 20.5350 | -89.9130 |  | 20.9200 | -103.4300 |
| 19.7820 | -96.5020 |  | 20.1200 | -89.0500 |  | 20.5390 | -89.9230 |  | 20.9280 | -89.6220 |
| 19.7900 | -103.2400 |  | 20.1278 | -89.8833 |  | 20.5392 | -89.9228 |  | 20.9300 | -89.6200 |
| 19.8110 | -96.4450 |  | 20.1280 | -89.5830 |  | 20.5400 | -104.0700 |  | 20.9320 | -89.0190 |
| 19.8200 | -104.0600 |  | 20.1450 | -89.2200 |  | 20.5400 | -104.1900 |  | 20.9500 | -97.4000 |
| 19.8200 | -96.6760 |  | 20.1453 | -89.2200 |  | 20.5510 | -89.9110 |  | 20.9600 | -89.6200 |
| 19.8300 | -104.7100 |  | 20.1467 | -97.7375 |  | 20.5560 | -98.7800 |  | 20.9640 | -89.6250 |
| 19.9167 | -97.6833 |  | 20.1470 | -97.7380 |  | 20.5660 | -89.9480 |  | 20.9678 | -87.0478 |
| 19.9170 | -97.6830 |  | 20.1500 | -104.8100 |  | 20.5667 | -89.9128 |  | 20.9678 | -89.6217 |
| 19.9306 | -97.2569 |  | 20.1800 | -96.9400 |  | 20.5670 | -89.9830 |  | 20.9680 | -87.0480 |
| 19.9310 | -97.2570 |  | 20.1917 | -97.6056 |  | 20.5760 | -98.7630 |  | 20.9680 | -89.6220 |
| 19.9367 | -97.6250 |  | 20.1920 | -97.6060 |  | 20.5960 | -98.7830 |  | 20.9780 | -88.1700 |
| 19.9370 | -97.6250 |  | 20.1970 | -87.4650 |  | 20.6020 | -88.2660 |  | 20.9806 | -86.8833 |
| 19.9400 | -88.8800 |  | 20.2300 | -96.8000 |  | 20.6100 | -104.0700 |  | 20.9810 | -86.8830 |
| 19.9428 | -88.8825 |  | 20.2389 | -89.4183 |  | 20.6133 | -105.2311 |  | 21.0125 | -105.2600 |
| 19.9430 | -97.3100 |  | 20.2390 | -89.4180 |  | 20.6264 | 49.6492 |  | 21.0137 | -105.2711 |
| 19.9431 | -97.3097 |  | 20.2458 | -97.9333 |  | 20.6430 | -90.2150 |  | 21.0190 | -88.1760 |
| 19.9478 | -88.9489 |  | 20.2460 | -97.9330 |  | 20.6691 | -105.2483 |  | 21.0300 | -104.1800 |
| 19.9480 | -88.9490 |  | 20.2478 | -89.4536 |  | 20.6700 | -103.7100 |  | 21.0300 | -97.4800 |
| 19.9558 | -97.3186 |  | 20.2480 | -89.4540 |  | 20.6780 | -88.5690 |  | 21.0389 | -99.7253 |
| 19.9560 | -97.3190 |  | 20.2540 | -89.4890 |  | 20.6800 | -88.5200 |  | 21.0390 | -99.7250 |
| 19.9608 | -97.4464 |  | 20.2700 | -103.4500 |  | 20.6800 | -98.9130 |  | 21.0530 | -99.8260 |
| 19.9610 | -97.4460 |  | 20.2700 | -89.3840 |  | 20.6803 | -88.5750 |  | 21.0600 | -97.5200 |
| 19.9960 | -97.4170 |  | 20.2708 | -102.5619 |  | 20.6900 | -88.2010 |  | 21.0600 | -98.3760 |
| 19.9961 | -97.4167 |  | 20.2900 | -103.3400 |  | 20.6900 | -88.5800 |  | 21.0640 | -89.6960 |
| 20.0000 | -102.0000 |  | 20.3190 | -98.1500 |  | 20.6906 | -88.2014 |  | 21.0642 | -89.6958 |
| 20.0169 | -89.7617 |  | 20.3194 | -98.1500 |  | 20.6980 | -88.5890 |  | 21.0650 | -88.1480 |
| 20.0170 | -89.7620 |  | 20.3300 | -86.9400 |  | 20.6981 | -88.5886 |  | 21.0660 | -89.6960 |
| 20.0290 | -97.5290 |  | 20.3600 | -89.7700 |  | 20.6990 | -88.5910 |  | 21.0670 | -98.3970 |
| 20.0292 | -97.5292 |  | 20.3621 | -105.3168 |  | 20.7190 | -88.0660 |  | 21.0700 | -97.7300 |
| 20.0314 | -105.3067 |  | 20.3643 | -105.3785 |  | 20.7236 | -89.4744 |  | 21.0740 | -98.3840 |
| 21.0820 | -87.1820 |  | 21.2880 | -99.4760 |  | 21.5560 | -88.2060 |  | 22.7686 | -99.3358 |
| 21.0900 | -105.1000 |  | 21.3000 | -98.7667 |  | 21.5640 | -88.3660 |  | 22.9350 | -99.3360 |
| 21.0920 | -98.3270 |  | 21.3063 | -98.7917 |  | 21.5654 | -105.2373 |  | 22.9400 | -99.3390 |
| 21.0930 | -89.2840 |  | 21.3073 | -106.2436 |  | 21.5720 | -88.1720 |  | 22.9420 | -99.3500 |
| 21.0974 | -105.1033 |  | 21.3077 | -100.0556 |  | 21.5900 | -105.2300 |  | 22.9900 | -105.8600 |
| 21.0990 | -99.9640 |  | 21.3244 | -98.7917 |  | 21.6400 | -105.1100 |  | 22.9903 | -105.8642 |
| 21.0994 | -99.9639 |  | 21.3305 | -104.9176 |  | 21.6496 | -105.1131 |  | 22.9986 | -99.3486 |
| 21.1010 | -98.3430 |  | 21.3450 | -104.9232 |  | 21.6610 | -105.0380 |  | 22.9990 | -99.3350 |
| 21.1060 | -99.7420 |  | 21.3515 | -98.7917 |  | 21.6731 | -106.5776 |  | 23.0260 | -99.1320 |
| 21.1250 | -100.1133 |  | 21.3530 | -87.0500 |  | 21.6731 | -106.6358 |  | 23.0261 | -99.1319 |
| 21.1330 | -88.1500 |  | 21.3705 | -104.5702 |  | 21.6760 | -99.2980 |  | 23.0300 | -105.7200 |
| 21.1400 | -98.4200 |  | 21.3800 | -99.0000 |  | 21.7100 | -104.6483 |  | 23.0300 | -99.1000 |
| 21.1430 | -88.1490 |  | 21.3825 | -104.9006 |  | 21.7585 | -104.7166 |  | 23.0330 | -99.1170 |
| 21.1510 | -88.9390 |  | 21.3861 | -98.9903 |  | 21.7675 | -98.4533 |  | 23.0400 | -105.5300 |
| 21.1530 | -98.6840 |  | 21.4030 | -99.0090 |  | 21.7680 | -98.4530 |  | 23.0400 | -105.8400 |
| 21.1533 | -98.6845 |  | 21.4200 | -98.9400 |  | 21.7684 | -105.1243 |  | 23.0510 | -99.1600 |
| 21.1628 | -97.9533 |  | 21.4203 | -98.9632 |  | 21.8061 | -98.4961 |  | 23.0514 | -99.1600 |
| 21.1630 | -97.9530 |  | 21.4250 | -98.9458 |  | 21.8090 | -98.5000 |  | 23.0700 | -105.4600 |
| 21.1656 | -99.1019 |  | 21.4250 | -98.9460 |  | 21.8110 | -103.7840 |  | 23.0775 | -99.1889 |
| 21.1660 | -99.1020 |  | 21.4347 | -106.4330 |  | 21.8178 | -98.4764 |  | 23.0780 | -99.1890 |
| 21.1690 | -99.1020 |  | 21.4500 | -105.0700 |  | 21.8180 | -98.4760 |  | 23.0833 | -109.3000 |
| 21.1694 | -99.1019 |  | 21.4583 | -105.0791 |  | 21.8300 | -103.7500 |  | 23.1386 | -99.1133 |
| 21.1740 | -98.9740 |  | 21.4667 | -105.1889 |  | 21.8314 | -103.7506 |  | 23.1830 | -99.1830 |
| 21.1750 | -98.6510 |  | 21.4705 | -98.9809 |  | 21.8970 | -98.8890 |  | 23.2200 | -106.4000 |
| 21.1800 | -103.1600 |  | 21.4720 | -87.6990 |  | 21.9100 | -104.9800 |  | 23.2200 | -99.1900 |
| 21.1800 | -97.6500 |  | 21.4760 | -88.4540 |  | 21.9170 | -98.8890 |  | 23.2361 | -106.4444 |
| 21.1860 | -99.0060 |  | 21.4780 | -87.8140 |  | 21.9400 | -104.9700 |  | 23.2510 | -98.5240 |
| 21.1861 | -99.0061 |  | 21.4800 | -105.2300 |  | 21.9439 | -104.9731 |  | 23.2536 | -106.1157 |
| 21.1943 | -98.7640 |  | 21.4819 | -105.1998 |  | 21.9447 | -104.5478 |  | 23.2600 | -106.2100 |
| 21.1990 | -98.1050 |  | 21.4833 | -98.9771 |  | 21.9819 | -99.0097 |  | 23.2621 | -106.2147 |
| 21.1992 | -98.1047 |  | 21.4900 | -105.1900 |  | 22.0181 | -99.0097 |  | 23.2800 | -106.4600 |
| 21.2006 | -99.0061 |  | 21.4920 | -88.5500 |  | 22.0829 | -98.9829 |  | 23.2804 | -106.4125 |
| 21.2010 | -99.0060 |  | 21.4958 | -105.1980 |  | 22.1006 | -99.0421 |  | 23.2900 | -106.2100 |
| 21.2020 | -98.1180 |  | 21.5090 | -105.1630 |  | 22.1628 | -99.0097 |  | 23.3600 | -106.3819 |
| 21.2097 | -98.9597 |  | 21.5110 | -88.4940 |  | 22.1667 | -98.4095 |  | 23.3661 | -105.9496 |
| 21.2100 | -88.1840 |  | 21.5130 | -88.2510 |  | 22.3600 | -99.2600 |  | 23.3661 | -105.9531 |
| 21.2100 | -98.9600 |  | 21.5280 | -88.4940 |  | 22.4922 | -104.7785 |  | 23.3900 | -105.9300 |
| 21.2148 | -104.9864 |  | 21.5300 | -105.2700 |  | 22.5800 | -105.2600 |  | 23.3900 | -105.9400 |
| 21.2300 | -86.7300 |  | 21.5320 | -87.7840 |  | 22.5850 | -99.1330 |  | 23.3942 | -105.9463 |
| 21.2350 | -89.5660 |  | 21.5394 | -105.0670 |  | 22.6000 | -99.0200 |  | 23.4200 | -105.9000 |
| 21.2430 | -98.7917 |  | 21.5394 | -105.1107 |  | 22.6014 | -99.0280 |  | 23.4244 | -105.8952 |
| 21.2521 | -98.7917 |  | 21.5394 | -105.1689 |  | 22.6360 | -104.0330 |  | 23.4244 | -105.9025 |
| 21.2550 | -97.9820 |  | 21.5394 | -105.2762 |  | 22.6364 | -105.3194 |  | 23.4300 | -105.8200 |
| 21.2570 | -86.7460 |  | 21.5394 | -105.2780 |  | 22.6440 | -99.0370 |  | 23.4300 | -105.8500 |
| 21.2611 | -98.7917 |  | 21.5394 | -105.2853 |  | 22.6442 | -99.0369 |  | 23.4300 | -105.8900 |
| 21.2660 | -99.1950 |  | 21.5436 | -105.2697 |  | 22.6453 | -105.2350 |  | 23.4300 | -105.9400 |
| 21.2754 | -104.9047 |  | 21.5480 | -88.0710 |  | 22.6540 | -99.0260 |  | 23.4308 | -105.8961 |
| 21.2770 | -86.8650 |  | 21.5541 | -105.2433 |  | 22.7500 | -105.8800 |  | 23.4400 | -98.3500 |
| 23.4670 | -104.3670 |  | 24.4100 | -106.6300 |  | 26.7972 | -108.9322 |  | 27.0430 | -108.9737 |
| 23.4906 | -106.4802 |  | 24.4100 | -106.6800 |  | 26.8000 | -108.1700 |  | 27.0448 | -109.0097 |
| 23.6116 | -106.5605 |  | 24.4787 | -105.2930 |  | 26.8300 | -108.2500 |  | 27.0587 | -109.0028 |
| 23.8300 | -106.6500 |  | 24.9030 | -106.3720 |  | 26.9451 | -108.8843 |  | 27.0640 | -109.0167 |
| 23.8400 | -106.6100 |  | 24.9270 | -106.4110 |  | 26.9500 | -109.3000 |  | 27.0700 | -108.3800 |
| 23.8700 | -106.3200 |  | 25.3300 | -107.5500 |  | 26.9700 | -108.8100 |  | 27.0800 | -108.9300 |
| 23.8700 | -106.5900 |  | 25.3770 | -107.5580 |  | 26.9920 | -107.7140 |  | 27.0815 | -108.9322 |
| 23.9200 | -106.8900 |  | 25.6333 | -99.0333 |  | 27.0233 | -108.9322 |  | 27.1100 | -108.3600 |
| 23.9230 | -99.2980 |  | 26.0400 | -108.8000 |  | 27.0300 | -108.9900 |  | 27.2240 | -108.7316 |
| 23.9233 | -99.2983 |  | 26.1629 | -109.0679 |  | 27.0300 | -109.0100 |  | 27.3300 | -107.5800 |
| 23.9400 | -106.4300 |  | 26.4300 | -108.5600 |  | 27.0360 | -107.7260 |  | 27.9477 | -110.6653 |
| 24.3000 | -107.3600 |  | 26.6620 | -107.6810 |  | 27.0375 | -109.0097 |  | 27.9598 | -111.0398 |
| 24.3200 | -107.3600 |  | 26.6820 | -107.6580 |  | 27.0375 | -109.0097 |  | 28.0270 | -111.0676 |
| 24.3740 | -98.5570 |  | 26.6980 | -107.6790 |  | 27.0411 | -109.0097 |  | 29.0047 | -109.7317 |
| 24.3742 | -98.5567 |  | 26.7400 | -108.3900 |  | 27.0422 | -108.9723 |  | 29.1500 | -109.4000 |
| 24.4100 | -106.5700 |  |  |  |  |  |  |  |  |  |

**Table S3.** Atmosphere-Ocean General Circulation Models (AOGCMs) used in the ecological niche modeling of *Glossophaga soricina.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model ID** | **Modelling Centre** | **Resolution\*** | **Source** | **Year** |
| CCSM4 | University of Miami – RSMAS. USA | 0.9° × 1.25° | CMIP5/PMIP3 | 2012 |
| CNRM-CM5 | Centre National de Recherches Meteorologiques / Centre Europeen de Recherche et Formation Avancees en Calcul Scientifique. France | 1.4° x 1.4° | CMIP5/PMIP3 | 2012 |
| MIROC-ESM | Atmosphere and Ocean Research Institute (University of Tokyo). National Institute for Environmental Studies and Japan Agency for Marine-Earth Science and Technology. Japan | 2.8° × 2.8° | CMIP5/PMIP3 | 2012 |
| MPI-ESM-P | Max Planck Institute for Meteorology. Germany | 1.9° × 1.9° | CMIP5/PMIP3 | 2011 |
| MRI-CGCM3 | Meteorological Research Institute. Japan | 1.1° x 1.1° | CMIP5/PMIP3 | 2012 |

\*longitude × latitude

CMIP5 – Coupled Model Intercomparison Project. Phase 5 (<http://cmip-pcmdi.llnl.gov/>)

PMIP3 – Paleoclimate Modelling Intercomparison Project. Phase 3 (<http://pmip3.lsce.ipsl.fr/>)

**Table S4.** Ecological niche modeling methods used to estimate *Glossophaga soricina* potential distribution.

|  |  |
| --- | --- |
| **Method** | **Species data type** |
| Bioclimatic Envelope (BIOCLIM) | Presence only |
| Ecological Niche Factor Analysis (ENFA) | Presence only |
| Euclidian Distance (EuclidDist) | Presence only |
| Gower Distance (GowerDist) | Presence only |
| Mahalanobis Distance (MahalDist) | Presence only |

**Table S5.** Percentage of different landscape components in buffers of 2 and 5 km settled in 18 populations of *Glossophaga soricina* in the Brazilian Cerrado.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2 km buffer** | | | | | | | **5 km buffer** | | | | | | |
| **Population** | **Agriculture** | **Water body** | **Urban area** | **Natural vegetation remnants** | **Pasture** | **Mining and outcrops** | **Other** | **Agriculture** | **Water body** | **Urban area** | **Natural vegetation remnants** | **Pasture** | **Mining and outcrops** | **Other** |
| **1** | 0.000 | 15.923 | 69.051 | 10.945 | 4.081 | 0.000 | 0.000 | 0.000 | 14.840 | 46.892 | 35.923 | 2.345 | 0.000 | 0.000 |
| **2** | 0.000 | 0.000 | 0.000 | 100.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 97.369 | 2.631 | 0.000 | 0.000 |
| **3** | 0.000 | 0.000 | 0.000 | 88.797 | 11.203 | 0.000 | 0.000 | 6.980 | 0.000 | 0.000 | 78.005 | 3.711 | 0.000 | 11.303 |
| **4** | 12.080 | 0.000 | 0.000 | 24.782 | 8.988 | 0.000 | 54.150 | 18.304 | 0.000 | 0.526 | 15.654 | 17.446 | 0.000 | 48.070 |
| **5** | 0.000 | 30.017 | 0.000 | 69.983 | 0.000 | 0.000 | 0.000 | 0.000 | 7.877 | 0.000 | 90.489 | 1.634 | 0.000 | 0.000 |
| **6** | 14.591 | 0.000 | 17.089 | 11.763 | 15.259 | 0.000 | 41.300 | 23.219 | 0.000 | 3.153 | 15.931 | 19.997 | 0.000 | 38.700 |
| **7** | 17.078 | 9.2444 | 0.211 | 28.546 | 12.921 | 0.000 | 32.000 | 15.767 | 1.840 | 8.276 | 32.482 | 18.434 | 0.000 | 23.200 |
| **8** | 0.000 | 15.214 | 0.000 | 69.572 | 15.214 | 0.000 | 0.000 | 7.594 | 15.914 | 0.000 | 54.184 | 14.308 | 0.000 | 8.000 |
| **9** | 0.000 | 0.000 | 0.000 | 100.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| **10** | 18.657 | 0.000 | 0.000 | 23.095 | 4.870 | 8.277 | 45.100 | 23.904 | 0.000 | 0.000 | 21.795 | 3.567 | 3.634 | 47.100 |
| **11** | 0.000 | 0.000 | 0.000 | 62.689 | 0.000 | 37.310 | 0.000 | 0.000 | 0.000 | 0.000 | 52.419 | 1.265 | 46.316 | 0.000 |
| **12** | 0.000 | 0.000 | 47.147 | 17.316 | 33.037 | 2.500 | 0.000 | 0.159 | 1.559 | 7.540 | 54.491 | 34.751 | 1.300 | 0.200 |
| **13** | 0.539 | 0.000 | 0.000 | 51.687 | 27.474 | 0.000 | 20.300 | 20.070 | 0.000 | 0.000 | 38.185 | 6.244 | 0.000 | 35.500 |
| **14** | 5.170 | 0.636 | 29.980 | 24.201 | 22.374 | 18.274 | 0.000 | 25.649 | 0.102 | 5.496 | 17.795 | 21.287 | 29.671 | 0.000 |
| **15** | 47.435 | 0.000 | 7.691 | 8.442 | 32.213 | 4.219 | 0.000 | 51.879 | 0.000 | 1.230 | 10.240 | 25.821 | 10.830 | 0.000 |
| **16** | 10.449 | 0.000 | 0.000 | 64.458 | 23.301 | 1.800 | 0.000 | 10.195 | 0.000 | 0.000 | 59.483 | 25.536 | 4.786 | 0.000 |
| **17** | 0.000 | 0.000 | 21.539 | 71.953 | 6.508 | 0.000 | 0.000 | 0.000 | 0.000 | 13.501 | 66.238 | 18.497 | 1.764 | 0.000 |
| **18** | 0.000 | 0.000 | 0.000 | 99.175 | 0.825 | 0.000 | 0.000 | 1.000 | 0.000 | 2.530 | 76.126 | 19.144 | 0.000 | 1.200 |

**Table S6.** Pairwise *FST* for the 18 populations of *Glossophaga soricina* sampled in the Brazilian Cerrado biome, based on microsatellite loci. **\*** Significant values (p<0.05).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **1** | 0.063\* | 0.008 | 0.007 | 0.013\* | 0.083\* | 0.029\* | 0.035\* | 0.001 | 0.013\* | 0.027\* | 0.080\* | 0.021\* | 0.002 | 0.016\* | 0.011 | 0.004\* | 0.319\* |
| **2** |  | 0.027 | 0.019 | 0.036 | 0.092 | -0.003 | 0.002 | 0.045\* | 0.026\* | 0.064\* | 0.090\* | 0.083\* | 0.024 | 0.036 | 0.056\* | 0.067\* | 0.384\* |
| **3** |  |  | -0.016 | -0.016 | 0.028 | -0.018 | 0.003 | 0.006 | -0.012 | 0.005 | 0.034 | -0.001 | 0.002 | -0.022 | -0.007 | 0.006 | 0.296\* |
| **4** |  |  |  | -0.024 | 0.031 | -0.028 | -0.002 | -0.001 | -0.010 | -0.005 | 0.019\* | 0.004 | -0.003 | -0.029 | 0.002\* | 0.004\* | 0.330\* |
| **5** |  |  |  |  | 0.019 | -0.019 | 0.014 | 0.008 | -0.013 | -0.005 | 0.006 | 0.010\* | 0.001 | -0.028 | 0.012\* | 0.008 | 0.282\* |
| **6** |  |  |  |  |  | 0.013 | 0.057 | 0.053 | 0.055 | 0.059 | 0.016 | 0.062 | 0.058 | 0.049 | 0.070\* | 0.075\* | 0.340\* |
| **7** |  |  |  |  |  |  | -0.016 | 0.018 | 0.004 | 0.008 | 0.039\* | 0.017\* | 0.002 | 0.003 | -0.009 | 0.011 | 0.342\* |
| **8** |  |  |  |  |  |  |  | 0.009 | 0.012\* | 0.033\* | 0.043\* | 0.044\* | 0.013 | 0.012 | 0.023\* | 0.030 | 0.370\* |
| **9** |  |  |  |  |  |  |  |  | 0.022\* | 0.034\* | 0.056\* | 0.038\* | 0.001 | 0.019 | 0.024\* | 0.008\* | 0.373\* |
| **10** |  |  |  |  |  |  |  |  |  | 0.003 | 0.036\* | 0.008 | 0.013 | -0.014 | 0.018\* | 0.019\* | 0.295\* |
| **11** |  |  |  |  |  |  |  |  |  |  | 0.014 | 0.011 | 0.023 | -0.024 | 0.014\* | 0.029\* | 0.299\* |
| **12** |  |  |  |  |  |  |  |  |  |  |  | 0.044\* | 0.051 | 0.005 | 0.061\* | 0.072\* | 0.337\* |
| **13** |  |  |  |  |  |  |  |  |  |  |  |  | 0.013\* | 0.002 | 0.014\* | 0.020\* | 0.282\* |
| **14** |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.001 | 0.013\* | 0.013 | 0.335\* |
| **15** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.013\* | 0.025\* | 0.306\* |
| **16** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.002 | 0.304\* |
| **17** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.321\* |

**Table S7.** Pairwise Jost’s *D* for the 18 populations of *Glossophaga soricina* sampled in the Brazilian Cerrado biome, based on microsatellite loci.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **1** | 0.046 | 0.008 | 0.002 | 0.023 | 0.125 | 0.024 | 0.017 | 0.000 | 0.009 | 0.036 | 0.113 | 0.039 | 0.000 | 0.017 | 0.016 | 0.000 | 0.551 |
| **2** |  | 0.032 | 0.022 | 0.046 | 0.105 | 0.000 | 0.004 | 0.044 | 0.030 | 0.075 | 0.103 | 0.096 | 0.026 | 0.040 | 0.071 | 0.074 | 0.576 |
| **3** |  |  | 0.000 | 0.000 | 0.062 | 0.000 | 0.011 | 0.012 | 0.000 | 0.017 | 0.065 | 0.012 | 0.013 | 0.000 | 0.000 | 0.010 | 0.522 |
| **4** |  |  |  | 0.000 | 0.056 | 0.000 | 0.003 | 0.002 | 0.000 | 0.000 | 0.036 | 0.012 | 0.003 | 0.000 | 0.010 | 0.006 | 0.554 |
| **5** |  |  |  |  | 0.054 | 0.000 | 0.030 | 0.019 | 0.000 | 0.005 | 0.029 | 0.030 | 0.016 | 0.000 | 0.029 | 0.018 | 0.496 |
| **6** |  |  |  |  |  | 0.038 | 0.081 | 0.071 | 0.084 | 0.096 | 0.047 | 0.108 | 0.094 | 0.095 | 0.118 | 0.112 | 0.608 |
| **7** |  |  |  |  |  |  | 0.000 | 0.020 | 0.009 | 0.018 | 0.063 | 0.031 | 0.007 | 0.012 | 0.000 | 0.013 | 0.555 |
| **8** |  |  |  |  |  |  |  | 0.011 | 0.017 | 0.045 | 0.059 | 0.060 | 0.018 | 0.021 | 0.037 | 0.035 | 0.581 |
| **9** |  |  |  |  |  |  |  |  | 0.028 | 0.044 | 0.071 | 0.048 | 0.003 | 0.026 | 0.036 | 0.008 | 0.590 |
| **10** |  |  |  |  |  |  |  |  |  | 0.007 | 0.056 | 0.015 | 0.021 | 0.000 | 0.031 | 0.026 | 0.504 |
| **11** |  |  |  |  |  |  |  |  |  |  | 0.031 | 0.024 | 0.037 | 0.000 | 0.028 | 0.042 | 0.515 |
| **12** |  |  |  |  |  |  |  |  |  |  |  | 0.077 | 0.077 | 0.026 | 0.103 | 0.103 | 0.575 |
| **13** |  |  |  |  |  |  |  |  |  |  |  |  | 0.025 | 0.015 | 0.030 | 0.029 | 0.470 |
| **14** |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.012 | 0.027 | 0.016 | 0.538 |
| **15** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.030 | 0.035 | 0.517 |
| **16** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.007 | 0.565 |
| **17** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.539 |

**Table S8.** Pairwise *G’ST* for the 18 populations of *Glossophaga soricina* sampled in the Brazilian Cerrado biome, based on microsatellite loci.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **1** | 0.088 | 0.014 | 0.004 | 0.041 | 0.209 | 0.045 | 0.033 | 0.000 | 0.016 | 0.063 | 0.189 | 0.068 | 0.000 | 0.031 | 0.028 | 0.000 | 0.702 |
| **2** |  | 0.058 | 0.042 | 0.085 | 0.190 | 0.000 | 0.008 | 0.088 | 0.056 | 0.134 | 0.185 | 0.170 | 0.051 | 0.076 | 0.125 | 0.136 | 0.737 |
| **3** |  |  | 0.000 | 0.000 | 0.104 | 0.000 | 0.021 | 0.022 | 0.000 | 0.029 | 0.109 | 0.020 | 0.023 | 0.000 | 0.000 | 0.017 | 0.665 |
| **4** |  |  |  | 0.000 | 0.099 | 0.000 | 0.007 | 0.003 | 0.000 | 0.000 | 0.064 | 0.022 | 0.006 | 0.000 | 0.018 | 0.011 | 0.703 |
| **5** |  |  |  |  | 0.093 | 0.000 | 0.055 | 0.035 | 0.000 | 0.008 | 0.050 | 0.050 | 0.029 | 0.000 | 0.048 | 0.031 | 0.644 |
| **6** |  |  |  |  |  | 0.069 | 0.146 | 0.129 | 0.141 | 0.158 | 0.083 | 0.177 | 0.162 | 0.159 | 0.190 | 0.186 | 0.748 |
| **7** |  |  |  |  |  |  | 0.000 | 0.038 | 0.016 | 0.031 | 0.111 | 0.054 | 0.013 | 0.022 | 0.000 | 0.023 | 0.706 |
| **8** |  |  |  |  |  |  |  | 0.022 | 0.032 | 0.081 | 0.108 | 0.106 | 0.035 | 0.038 | 0.066 | 0.065 | 0.736 |
| **9** |  |  |  |  |  |  |  |  | 0.051 | 0.080 | 0.128 | 0.087 | 0.006 | 0.047 | 0.064 | 0.016 | 0.743 |
| **10** |  |  |  |  |  |  |  |  |  | 0.012 | 0.095 | 0.026 | 0.037 | 0.000 | 0.052 | 0.044 | 0.652 |
| **11** |  |  |  |  |  |  |  |  |  |  | 0.053 | 0.041 | 0.066 | 0.000 | 0.046 | 0.071 | 0.662 |
| **12** |  |  |  |  |  |  |  |  |  |  |  | 0.129 | 0.135 | 0.046 | 0.166 | 0.171 | 0.720 |
| **13** |  |  |  |  |  |  |  |  |  |  |  |  | 0.044 | 0.026 | 0.050 | 0.050 | 0.621 |
| **14** |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.021 | 0.047 | 0.029 | 0.693 |
| **15** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.051 | 0.060 | 0.666 |
| **16** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.012 | 0.702 |
| **17** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.687 |

**Table S9.** Pairwise *FST* for the 18 populations of *Glossophaga soricina* sampled in the Brazilian Cerrado biome, based on *CYB* sequencing. \* Significant values (p<0.05).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Population** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **1** | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** | 0.295\* | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** | 0.001 | 0.226\* | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | 0.706\* | 0.117\* | 0.659\* | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | 0.049 | 0.497\* | 0.089\* | 0.878\* | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | 0.014 | 0.448\* | 0.019 | 0.852\* | 0.001 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | 0.001 | 0.403\* | 0.001 | 0.831\* | 0.002 | 0.002 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |
| **8** | 0.828\* | 0.233\* | 0.796\* | 0.002 | 0.981\* | 0.978\* | 0.977\* | 0.000 |  |  |  |  |  |  |  |  |  |  |
| **9** | 0.006 | 0.485\* | 0.050 | 0.842\* | 0.005 | 0.002 | 0.002 | 0.931\* | 0.000 |  |  |  |  |  |  |  |  |  |
| **10** | 0.059 | 0.537\* | 0.129\* | 0.884\* | 0.017 | 0.003 | 0.001 | 0.964\* | 0.015 | 0.000 |  |  |  |  |  |  |  |  |
| **11** | 0.037 | 0.464\* | 0.044 | 0.862\* | 0.001 | 0.014 | 0.001 | 0.982\* | 0.024 | 0.058 | 0.000 |  |  |  |  |  |  |  |
| **12** | 0.016 | 0.470\* | 0.045 | 0.863\* | 0.001 | 0.001 | 0.001 | 0.977\* | 0.010 | 0.017 | 0.034 | 0.000 |  |  |  |  |  |  |
| **13** | 0.001 | 0.446\* | 0.016 | 0.851\* | 0.002 | 0.002 | 0.001 | 0.976\* | 0.045 | 0.040 | 0.002 | 0.002 | 0.000 |  |  |  |  |  |
| **14** | 0.158\* | 0.001 | 0.046 | 0.232\* | 0.563\* | 0.456\* | 0.356\* | 0.455\* | 0.501\* | 0.611\* | 0.495\* | 0.508\* | 0.452\* | 0.000 |  |  |  |  |
| **15** | 0.007 | 0.456\* | 0.029 | 0.855\* | 0.020 | 0.001 | 0.020 | 0.975\* | 0.028 | 0.042 | 0.076 | 0.022 | 0.046 | 0.477\* | 0.000 |  |  |  |
| **16** | 0.059 | 0.537\* | 0.101\* | 0.867\* | 0.000 | 0.001 | 0.001 | 0.940\* | 0.000 | 0.020 | 0.009 | 0.017 | 0.040 | 0.582\* | 0.001 | 0.000 |  |  |
| **17** | 0.851\* | 0.272\* | 0.828\* | 0.006 | 0.979\* | 0.977\* | 0.976\* | 0.001 | 0.936\* | 0.965\* | 0.980\* | 0.976\* | 0.975\* | 0.534\* | 0.974\* | 0.943\* | 0.000 |  |
| **18** | 0.443\* | 0.001 | 0.375\* | 0.021 | 0.645\* | 0.597\* | 0.555\* | 0.139\* | 0.628\* | 0.681\* | 0.613\* | 0.620\* | 0.595\* | 0.001 | 0.605\* | 0.676\* | 0.181\* | 0.000 |

**Table S10.** Genetic diversity parameters for the 18 populations of *Glossophaga soricina* sampledin the Brazilian Cerrado biome. For population code see Figure 1.N, number of individuals analyzed; *A,* mean number of alleles per locus; *AR,* allelic richness based on minimum sample size (4 individuals); *He,* expected heterozygosity under Hardy-Weinberg equilibrium; *Ho,* observed heterozygosity; *f,* inbreeding coefficient (\*P < 0.05, \*\*P < 0.01); θ, coalescent parameter; CI, credibility interval; *Ne*, effective population size (a, contemporary, based on coancestry; b, historical, based on coalescence); Nh. number of haplotypes; h, haplotype diversity; *π*, nucleotide diversity.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pop** |  | | | **Microssatellite** | | | | | | | **mtDNA** | | | | | |
| **N** | ***A*** | ***AR*** | | ***He*** | ***Ho*** | ***f*** | ***Ne* (95% *CI*)a** | **θ (95%CI)** | ***Ne* (95%CI)b** | **N** | **Nh** | ***h*** | ***π*** | **θ (95%CI)** | ***Ne* (95%CI)b** |
| **1** | 10 | 3.667 | 2.860 | | 0.563 | 0.578 | -0.026 | 6.8 (0.2-25.0) | 0.060  (0.003. 0.039) | 15.05  (0.25. 19.75) | 8 | 8 | 1.000 +/- 0.062 | 0.165 +/- 0.091 | 6.054  (0.299. 9.444) | 15135.08  (747.22. 23610.88) |
| **2** | 22 | 5.667 | 2.833 | | 0.465 | 0.427 | 0.081\* | 85.9 (0.1-431.1) | 0.416  (0.013. 1.933) | 104.10  (3.13. 483.25) | 18 | 15 | 0.961 +/- 0.039 | 0.320+/- 0.161 | 0.008  (0.004. 0.009) | 20.43  (9.96. 22.44) |
| **3** | 10 | 4.667 | 3.281 | | 0.601 | 0.482 | 0.198\*\* | 4.1 (1.2-8.7) | 2.166  (0.021. 8.180) | 541.45  (5.18. 2045.00) | 6 | 5 | 0.933 +/- 0.121 | 0.233+/- 0.136 | 0.015  (0.007. 0.018) | 38.37  (17.89. 45.29) |
| **4** | 14 | 4.333 | 3.046 | | 0.549 | 0.465 | 0.153\* | 9.7 (1.6-24.8) | 1.859  (0.027. 7.608) | 464.90  (6.85. 1902.00) | 10 | 9 | 0.978 +/- 0.054 | 0.134 +/- 0.072 | 0.045  (0.024. 0.084) | 112.79  (59.41. 210.79) |
| **5** | 15 | 4.556 | 3.074 | | 0.590 | 0.376 | 0.347\*\* | 7.8 (0.6-24.4) | 1.776  (0.021. 7.775) | 443.93  (44.00. 943.75) | 11 | 11 | 1.000 +/- 0.039 | 0.014 +/- 0.008 | 0.007  (0.004. 0.010) | 17.58  (10.12. 26.21) |
| **6** | 10 | 3.778 | 2.781 | | 0.562 | 0.272 | 0.516\*\* | 19.9 (0.1-100.1) | 0.329  (0.002. 1.786) | 82.33  (0.48. 446.25) | 7 | 7 | 1.000 +/- 0.076 | 0.016 +/- 0.010 | 0.010  (0.005. 0.013) | 26.15  (13.42. 33.60) |
| **7** | 7 | 3.778 | 3.033 | | 0.535 | 0.524 | 0.020 | 21.9 (1.1-109.9) | 1.650  (0.009. 7.296) | 412.50  (2.38. 1824.00) | 5 | 5 | 1.000 +/- 0.126 | 0.017 +/- 0.011 | 0.085  (0.050. 1.470) | 212.94  (126.11. 3675.29) |
| **8** | 10 | 4.222 | 2.916 | | 0.492 | 0.463 | 0.058 | 23.8 (0.9-119.7) | 0.697  (0.004. 4.932) | 174.13  (1.03. 1233.25) | 7 | 7 | 1.000 +/- 0.076 | 0.014 +/- 0.009 | 0.018  (0.013. 0.066) | 44.09  (33.40. 164.01) |
| **9** | 13 | 4.444 | 2.804 | | 0.495 | 0.480 | 0.031 | 21.5 (1.1-114.6) | 1.202  (0.006. 6.877) | 300.55  (1.70. 1719.25) | 14 | 14 | 1.000 +/- 0.027 | 0.060+/- 0.031 | 2.263  (0.352. 9.603) | 5656.89  (879.39. 24006.37) |
| **10** | 18 | 4.889 | 3.130 | | 0.578 | 0.549 | 0.051 | 66.1 (0.1-332.0) | 0.964  (0.017. 5.976) | 240.93  (4.35. 1494.00) | 17 | 17 | 1.000 +/- 0.020 | 0.036 +/- 0.019 | 0.064  (0.035. 0.174) | 160.12  (88.27. 433.99) |
| **11** | 14 | 4.889 | 3.190 | | 0.585 | 0.514 | 0.122\* | 60.3 (0.1-302.8) | 0.847  (0.007. 5.052) | 211.68  (1.90. 1263.25) | 8 | 5 | 0.964 +/- 0.077 | 0.011 +/- 0.007 | 0.011  (0.010. 0.031) | 27.84  (24.07. 77.32) |
| **12** | 9 | 3.667 | 2.848 | | 0.559 | 0.391 | 0.301\*\* | 24.9 (1.1-136.2) | 0.144  (0.003. 0.233) | 36.05  (0.63. 58.25) | 9 | 9 | 1.000 +/- 0.052 | 0.017 +/- 0.010 | 1.247  (0.147. 11.234) | 3116.69  (366.44. 28084.90) |
| **13** | 10 | 4.111 | 3.043 | | 0.584 | 0.500 | 0.144\* | 19.9 (0.9-104.5) | 1.921  (0.008 7.754) | 480.25  (1.93. 1938.50) | 7 | 7 | 1.000 +/- 0.076 | 0.016 +/- 0.010 | 0.194  (0.056. 3.265) | 485.15  (140.15. 8162.19) |
| **14** | 9 | 4.000 | 2.955 | | 0.529 | 0.481 | 0.089 | 28.9 (0.1-145.0) | 1.983  (0.028. 7.438) | 495.68  (7.00. 1859.50) | 4 | 4 | 1.000 +/- 0.177 | 0.417+/- 0.273 | 0.191  (0.030. 6.510) | 478.10  (74.72. 16275.96) |
| **15** | 8 | 4.333 | 3.133 | | 0.576 | 0.472 | 0.180\* | 6.5 (1.1-16.8) | 1.221  (0.006. 7.103) | 305.15  (1.53. 1775.75) | 8 | 8 | 1.000 +/- 0.062 | 0.020 +/- 0.012 | 0.039  (0.012. 0.403) | 98.75  (29.85. 1006.36) |
| **16** | 22 | 5.667 | 3.354 | | 0.600 | 0.492 | 0.180\*\* | 14.1 (0.1-70.6) | 0.025  (0.003. 0.100) | 6.33  (0.78. 25.05) | 20 | 20 | 1.000 +/- 0.016 | 0.046 +/- 0.023 | 0.341  (0.202. 11.020) | 852.17  (504.69. 27549.78) |
| **17** | 15 | 4.667 | 3.094 | | 0.559 | 0.572 | -0.024 | 3.1 (0.8-6.7) | 0.169  (0.004. 0.374) | 42.25  (1.13. 93.50) | 10 | 10 | 1.000 +/- 0.045 | 0.016 +/- 0.009 | 0.008  (0.005. 0.011) | 20.54  (13.37. 27.51) |
| **18** | 12 | 3.556 | 2.796 | | 0.505 | 0.478 | 0.054 | 5.0 (0.9-13.7) | 0.003  (0.0003. 0.006) | 0.69  (0.21. 1.58) | 14 | 14 | 1.000 +/- 0.027 | 0.274+/- 0.141 | 1.364  (0.114. 9.235) | 3409.87  (284.30. 23087.62) |
| Mean | 11 | 4.333 | 3.038 | | 0.560 | 0.480 | 0.105 | 23.9 | 0.905 | 226.30 | 8.5 | 8.5 | 1.000 | 0.028 | 0.054 | 136.45 |
| SD | 4.52 | 0.610 | 0.167 | | 0.039 | 0.071 | 0.135 | 23.5 | 0.752 | 193.32 | 4.5 | 4.6 | 0.019 | 0.127 | 1.449 | 3709.99 |
| **Overall** | - | - | - | | 0.889 | 0.678 | - | - | 3.789  (0.056. 9.654) | 947.25  (5.88. 2865.98) | - | - | 0.998 +/- 0.001 | 0.255+/- 0.122 | 9.184  (1.002. 21.302) | 22960.00  (2505.00. 53255.00) |

**Table S11.** Proportion of membership of each individual of *Glossophaga soricina* to the 3 clusters inferred by Bayesian analyses implemented in the Structure software.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Original** | **Inferred cluster** | | |
| **Individual** | **population** | **1** | **2** | **3** |
| **1** | 1 | **0.673** | 0.199 | 0.128 |
| **2** | 1 | 0.060 | 0.047 | **0.893** |
| **3** | 1 | **0.871** | 0.008 | 0.122 |
| **4** | 1 | **0.977** | 0.011 | 0.012 |
| **5** | 1 | 0.414 | 0.027 | **0.559** |
| **6** | 1 | **0.893** | 0.018 | 0.090 |
| **7** | 1 | **0.534** | 0.009 | 0.457 |
| **8** | 1 | **0.974** | 0.009 | 0.017 |
| **9** | 1 | **0.501** | 0.025 | 0.475 |
| **10** | 1 | **0.955** | 0.024 | 0.021 |
| **11** | 2 | **0.947** | 0.013 | 0.039 |
| **12** | 2 | **0.940** | 0.008 | 0.052 |
| **13** | 2 | **0.791** | 0.017 | 0.192 |
| **14** | 2 | **0.975** | 0.010 | 0.015 |
| **15** | 2 | **0.925** | 0.019 | 0.056 |
| **16** | 2 | **0.971** | 0.009 | 0.020 |
| **17** | 2 | **0.617** | 0.007 | 0.376 |
| **18** | 2 | 0.047 | 0.020 | **0.934** |
| **19** | 2 | 0.342 | 0.090 | **0.568** |
| **20** | 2 | **0.922** | 0.009 | 0.069 |
| **21** | 2 | 0.035 | **0.948** | 0.016 |
| **22** | 2 | **0.950** | 0.011 | 0.039 |
| **23** | 2 | **0.911** | 0.011 | 0.077 |
| **24** | 2 | **0.955** | 0.009 | 0.036 |
| **25** | 2 | **0.580** | 0.011 | 0.409 |
| **26** | 2 | 0.202 | 0.016 | **0.782** |
| **27** | 2 | 0.303 | 0.055 | **0.641** |
| **28** | 2 | **0.853** | 0.014 | 0.133 |
| **29** | 2 | **0.790** | 0.010 | 0.200 |
| **30** | 2 | **0.738** | 0.008 | 0.254 |
| **31** | 2 | **0.926** | 0.017 | 0.058 |
| **32** | 2 | 0.244 | **0.690** | 0.066 |
| **33** | 2 | 0.016 | 0.008 | **0.976** |
| **34** | 3 | **0.549** | 0.010 | 0.441 |
| **35** | 3 | **0.602** | 0.117 | 0.281 |
| **36** | 3 | 0.008 | **0.985** | 0.007 |
| **37** | 3 | 0.040 | **0.934** | 0.026 |
| **38** | 3 | **0.812** | 0.009 | 0.179 |
| **39** | 3 | **0.882** | 0.025 | 0.093 |
| **40** | 3 | 0.363 | 0.007 | **0.630** |
| **41** | 3 | **0.574** | 0.276 | 0.150 |
| **42** | 3 | 0.238 | 0.008 | **0.754** |
| **43** | 3 | **0.717** | 0.170 | 0.114 |
| **44** | 4 | **0.657** | 0.251 | 0.092 |
| **45** | 4 | 0.315 | 0.019 | **0.667** |
| **46** | 4 | **0.852** | 0.056 | 0.092 |
| **47** | 4 | 0.160 | 0.007 | **0.832** |
| **48** | 4 | 0.117 | 0.017 | **0.866** |
| **49** | 4 | **0.786** | 0.110 | 0.104 |
| **50** | 4 | 0.453 | 0.009 | **0.538** |
| **51** | 4 | 0.441 | 0.013 | **0.547** |
| **52** | 4 | 0.440 | 0.079 | **0.481** |
| **53** | 4 | 0.143 | 0.167 | **0.690** |
| **54** | 4 | 0.087 | 0.017 | **0.896** |
| **55** | 4 | **0.795** | 0.021 | 0.184 |
| **56** | 4 | **0.826** | 0.010 | 0.164 |
| **57** | 4 | **0.955** | 0.009 | 0.036 |
| **58** | 5 | 0.063 | **0.675** | 0.262 |
| **59** | 5 | 0.075 | 0.025 | **0.900** |
| **60** | 5 | 0.268 | 0.128 | **0.604** |
| **61** | 5 | 0.095 | 0.012 | **0.894** |
| **62** | 5 | 0.143 | 0.015 | **0.842** |
| **63** | 5 | 0.023 | 0.010 | **0.967** |
| **64** | 5 | **0.941** | 0.011 | 0.048 |
| **65** | 5 | 0.023 | 0.011 | **0.966** |
| **66** | 5 | 0.751 | 0.012 | 0.237 |
| **67** | 5 | **0.862** | 0.013 | 0.125 |
| **68** | 5 | **0.584** | 0.026 | 0.390 |
| **69** | 5 | **0.779** | 0.008 | 0.213 |
| **70** | 5 | **0.547** | 0.017 | 0.436 |
| **71** | 5 | 0.036 | 0.025 | **0.939** |
| **72** | 5 | **0.942** | 0.013 | 0.045 |
| **73** | 6 | 0.022 | 0.007 | **0.971** |
| **74** | 6 | 0.112 | 0.015 | **0.873** |
| **75** | 6 | 0.020 | 0.008 | **0.972** |
| **76** | 6 | 0.015 | 0.013 | **0.971** |
| **77** | 6 | 0.015 | 0.077 | **0.909** |
| **78** | 6 | 0.021 | 0.008 | **0.971** |
| **79** | 6 | 0.065 | 0.006 | **0.928** |
| **80** | 6 | 0.410 | 0.009 | **0.581** |
| **81** | 6 | **0.828** | 0.091 | 0.081 |
| **82** | 6 | **0.842** | 0.070 | 0.089 |
| **83** | 7 | **0.772** | 0.045 | 0.182 |
| **84** | 7 | **0.900** | 0.012 | 0.088 |
| **85** | 7 | **0.611** | 0.018 | 0.371 |
| **86** | 7 | 0.316 | 0.137 | **0.547** |
| **87** | 7 | **0.560** | 0.159 | 0.281 |
| **88** | 7 | **0.640** | 0.012 | 0.348 |
| **89** | 7 | 0.461 | 0.011 | **0.528** |
| **90** | 8 | 0.040 | 0.173 | **0.786** |
| **91** | 8 | 0.014 | 0.005 | **0.980** |
| **92** | 8 | 0.038 | 0.008 | **0.954** |
| **93** | 8 | **0.930** | 0.010 | 0.061 |
| **94** | 8 | **0.825** | 0.011 | 0.163 |
| **95** | 8 | **0.958** | 0.009 | 0.033 |
| **96** | 8 | **0.561** | 0.201 | 0.238 |
| **97** | 8 | 0.441 | 0.010 | **0.549** |
| **98** | 8 | **0.390** | 0.293 | 0.317 |
| **99** | 8 | **0.845** | 0.009 | 0.146 |
| **100** | 9 | 0.042 | 0.014 | **0.944** |
| **101** | 9 | **0.945** | 0.016 | 0.038 |
| **102** | 9 | 0.015 | 0.008 | **0.977** |
| **103** | 9 | 0.024 | 0.194 | **0.782** |
| **104** | 9 | 0.059 | 0.013 | **0.928** |
| **105** | 9 | 0.020 | 0.006 | **0.974** |
| **106** | 9 | 0.024 | 0.007 | **0.969** |
| **107** | 9 | **0.962** | 0.011 | 0.028 |
| **108** | 9 | 0.055 | 0.017 | **0.928** |
| **109** | 9 | **0.659** | 0.007 | 0.333 |
| **110** | 9 | 0.062 | 0.007 | **0.931** |
| **111** | 9 | **0.899** | 0.006 | 0.094 |
| **112** | 9 | **0.862** | 0.096 | 0.042 |
| **113** | 9 | **0.820** | 0.016 | 0.164 |
| **114** | 10 | 0.313 | 0.008 | **0.679** |
| **115** | 10 | **0.835** | 0.012 | 0.153 |
| **116** | 10 | **0.666** | 0.038 | 0.296 |
| **117** | 10 | **0.678** | 0.246 | 0.076 |
| **118** | 10 | **0.610** | 0.012 | 0.378 |
| **119** | 10 | **0.919** | 0.011 | 0.070 |
| **120** | 10 | **0.678** | 0.035 | 0.286 |
| **121** | 10 | **0.683** | 0.089 | 0.228 |
| **122** | 10 | **0.872** | 0.011 | 0.117 |
| **123** | 10 | **0.961** | 0.010 | 0.029 |
| **124** | 10 | **0.919** | 0.019 | 0.062 |
| **125** | 10 | **0.650** | 0.033 | 0.317 |
| **126** | 10 | **0.564** | 0.392 | 0.043 |
| **127** | 10 | 0.268 | 0.014 | **0.718** |
| **128** | 10 | 0.485 | 0.015 | **0.500** |
| **129** | 10 | 0.089 | 0.013 | **0.897** |
| **130** | 10 | 0.440 | 0.033 | **0.528** |
| **131** | 10 | 0.296 | **0.653** | 0.051 |
| **132** | 11 | 0.018 | 0.007 | **0.976** |
| **133** | 11 | **0.754** | 0.022 | 0.224 |
| **134** | 11 | 0.277 | **0.562** | 0.161 |
| **135** | 11 | **0.848** | 0.021 | 0.131 |
| **136** | 11 | **0.731** | 0.015 | 0.254 |
| **137** | 11 | 0.243 | **0.727** | 0.030 |
| **138** | 11 | 0.024 | 0.011 | **0.965** |
| **139** | 11 | 0.057 | 0.053 | **0.890** |
| **140** | 11 | 0.080 | 0.007 | **0.913** |
| **141** | 11 | 0.048 | 0.134 | **0.818** |
| **142** | 11 | **0.960** | 0.012 | 0.028 |
| **143** | 11 | **0.566** | 0.017 | 0.418 |
| **144** | 11 | **0.715** | 0.030 | 0.255 |
| **145** | 11 | **0.977** | 0.009 | 0.014 |
| **146** | 12 | 0.059 | 0.007 | **0.934** |
| **147** | 12 | 0.018 | 0.007 | **0.975** |
| **148** | 12 | 0.019 | 0.008 | **0.973** |
| **149** | 12 | 0.016 | 0.007 | **0.977** |
| **150** | 12 | **0.476** | 0.256 | 0.269 |
| **151** | 12 | 0.196 | 0.019 | **0.786** |
| **152** | 12 | 0.018 | 0.005 | **0.976** |
| **153** | 12 | 0.022 | 0.011 | **0.968** |
| **154** | 12 | 0.028 | 0.018 | **0.954** |
| **155** | 13 | **0.638** | 0.043 | 0.319 |
| **156** | 13 | 0.364 | 0.050 | **0.586** |
| **157** | 13 | **0.812** | 0.043 | 0.145 |
| **158** | 13 | 0.396 | **0.558** | 0.046 |
| **159** | 13 | 0.337 | 0.215 | **0.447** |
| **160** | 13 | 0.083 | 0.012 | **0.906** |
| **161** | 13 | 0.219 | **0.717** | 0.063 |
| **162** | 13 | 0.071 | 0.031 | **0.898** |
| **163** | 13 | **0.651** | 0.022 | 0.328 |
| **164** | 13 | **0.878** | 0.051 | 0.072 |
| **165** | 14 | **0.965** | 0.008 | 0.027 |
| **166** | 14 | 0.459 | 0.020 | **0.521** |
| **167** | 14 | **0.687** | 0.010 | 0.303 |
| **168** | 14 | 0.065 | 0.011 | **0.924** |
| **169** | 14 | 0.049 | 0.010 | **0.941** |
| **170** | 14 | 0.131 | 0.058 | **0.812** |
| **171** | 14 | **0.723** | 0.009 | 0.267 |
| **172** | 14 | **0.723** | 0.046 | 0.231 |
| **173** | 14 | **0.643** | 0.227 | 0.130 |
| **174** | 15 | **0.679** | 0.009 | 0.312 |
| **175** | 15 | 0.025 | 0.114 | **0.861** |
| **176** | 15 | **0.929** | 0.035 | 0.037 |
| **177** | 15 | **0.907** | 0.018 | 0.074 |
| **178** | 15 | **0.849** | 0.012 | 0.138 |
| **179** | 15 | 0.233 | 0.025 | **0.742** |
| **180** | 15 | 0.018 | 0.008 | **0.974** |
| **181** | 15 | 0.279 | 0.017 | **0.704** |
| **182** | 16 | **0.599** | 0.015 | 0.386 |
| **183** | 16 | 0.459 | 0.036 | **0.504** |
| **184** | 16 | 0.142 | 0.019 | **0.840** |
| **185** | 16 | 0.071 | **0.894** | 0.035 |
| **186** | 16 | 0.948 | 0.032 | 0.020 |
| **187** | 16 | 0.302 | 0.017 | **0.681** |
| **188** | 16 | **0.942** | 0.012 | 0.046 |
| **189** | 16 | **0.887** | 0.063 | 0.051 |
| **190** | 16 | **0.964** | 0.008 | 0.028 |
| **191** | 16 | 0.013 | 0.979 | 0.009 |
| **192** | 16 | **0.924** | 0.026 | 0.050 |
| **193** | 16 | **0.940** | 0.014 | 0.046 |
| **194** | 16 | **0.927** | 0.015 | 0.058 |
| **195** | 16 | 0.036 | 0.013 | **0.950** |
| **196** | 16 | **0.868** | 0.021 | 0.111 |
| **197** | 16 | **0.701** | 0.177 | 0.122 |
| **198** | 16 | **0.974** | 0.008 | 0.019 |
| **199** | 16 | **0.687** | 0.023 | 0.290 |
| **200** | 16 | **0.791** | 0.018 | 0.191 |
| **201** | 16 | **0.885** | 0.094 | 0.021 |
| **202** | 16 | **0.606** | 0.060 | 0.333 |
| **203** | 16 | 0.010 | **0.983** | 0.007 |
| **204** | 17 | 0.137 | 0.180 | **0.684** |
| **205** | 17 | **0.608** | 0.012 | 0.380 |
| **206** | 17 | **0.690** | 0.165 | 0.145 |
| **207** | 17 | 0.465 | 0.009 | **0.527** |
| **208** | 17 | 0.693 | 0.032 | 0.275 |
| **209** | 17 | 0.512 | 0.009 | 0.478 |
| **210** | 17 | 0.292 | 0.220 | **0.488** |
| **211** | 17 | **0.846** | 0.049 | 0.105 |
| **212** | 17 | 0.072 | **0.700** | 0.229 |
| **213** | 17 | **0.792** | 0.021 | 0.188 |
| **214** | 17 | **0.478** | 0.139 | 0.383 |
| **215** | 17 | **0.638** | 0.148 | 0.215 |
| **216** | 17 | **0.904** | 0.010 | 0.086 |
| **217** | 17 | **0.887** | 0.048 | 0.065 |
| **218** | 17 | **0.801** | 0.009 | 0.190 |
| **219** | 18 | 0.009 | **0.985** | 0.006 |
| **220** | 18 | 0.006 | **0.989** | 0.005 |
| **221** | 18 | 0.010 | **0.982** | 0.007 |
| **222** | 18 | 0.006 | **0.986** | 0.008 |
| **223** | 18 | 0.008 | **0.986** | 0.006 |
| **224** | 18 | 0.006 | **0.988** | 0.006 |
| **225** | 18 | 0.017 | **0.935** | 0.048 |
| **226** | 18 | 0.007 | **0.985** | 0.008 |
| **227** | 18 | 0.008 | **0.985** | 0.007 |
| **228** | 18 | 0.027 | **0.928** | 0.046 |
| **229** | 18 | 0.253 | **0.507** | 0.241 |
| **230** | 18 | 0.017 | **0.957** | 0.026 |

**Table S12.** Haplotypes sampled by population of *Glossophaga soricina* in Brazilian Cerrado Biome and the correspondence between haplotypes in populations and in the network (see Appendix S2, Figure S3).

|  |  |  |
| --- | --- | --- |
| **Haplotypes in the Network** | **Haplotypes** | **Populations** |
| **H01** | H01. H02. H03. H04. H05. H06. H07. H08 | Pop1 |
| **H09** | H09 | Pop2. Pop17 |
| **H10** | H10. H11. H12. H13. H14. H15. H16. H17. H18. H19. H20. H22. H23 | Pop2 |
| **H21** | H21 | Pop2. Pop11 |
| **H24** | H24. H25. H26. H27 | Pop3 |
| **H28** | H28 | Pop3 |
| **H29** | H29. H30. H31. H32. H33. H34. H35. H36. H37 | Pop4 |
| **H38** | H38. H39. H40. H41. H42. H43. H44. H45. H46. H47. H48 | Pop5 |
| **H49** | H49. H50. H52. H53. H54. H55 | Pop6 |
| **H51** | H51 | Pop6. Pop11. Pop13 |
| **H56** | H56. H57. H58. H59. H60 | Pop7 |
| **H61** | H61. H62. H63. H64. H65. H66 | Pop8 |
| **H67** | H67. H68. H69. H70. H71. H72. H73. H74. H75. H76. H77. H78. H79. H80 | Pop9 |
| **H81** | H81. H82. H83. H84. H85. H86. H87. H88. H89. H90. H91. H92. H93. H94. H95. H96. H97 | Pop10 |
| **H98** | H98. H99. H100. H102 | Pop11 |
| **H101** | H101 | Pop11. Pop12 |
| **H103** | H103. H104. H105. H106. H107. H108. H109. H110 | Pop12 |
| **H111** | H111. H112. H113. H114. H115. H116 | Pop13 |
| **H117** | H117. H118. H119. H120 | Pop14 |
| **H121** | H121. H122. H123. H124. H125. H126. H127. H128 | Pop15 |
| **H129** | H129. H130. H131. H132. H133. H134. H135. H136. H137. H138. H139. H140. H141. H142. H143. H144. H145. H146. H147. H148 | Pop16 |
| **H149** | H149. H150. H151. H152. H153. H154. H155. H156. H157 | Pop17 |
| **H158** | H158. H159. H160. H161. H162. H163. H164. H165. H166. H167. H168. H169. H170. H171 | Pop18 |

**Table S13** Average ancestry coefficients for 229 individuals of *Glossophaga soricina* at 18 populations in the Brazilian Cerrado, for mitochondrial CYB estimated using BAPS 6.0.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Population** | **Locality** | **Cluster1** | | **Cluster2** | **Cluster3** |
| 1 | Brasília - DF | 0.125 | 0.875 | | 0.000 |
| 2 | P. N. Chapada dos Veadeiros - GO | 0.611 | 0.389 | | 0.000 |
| 3 | P. E. Terra Ronca - GO | 0.166 | 0.834 | | 0.000 |
| 4 | Floresta Nacional de Silvânia - GO | 0.900 | 0.100 | | 0.000 |
| 5 | Dianápolis - Porto Franco - TO | 0.000 | 1.000 | | 0.000 |
| 6 | Vianópolis - GO | 0.000 | 1.000 | | 0.000 |
| 7 | E. E. Águas Emendadas - DF | 0.000 | 1.000 | | 0.000 |
| 8 | P. N. Chapada Diamantina - BA | 1.000 | 0.000 | | 0.000 |
| 9 | P. N. Grande Sertão Veredas - MG | 0.000 | 0.857 | | 0.143 |
| 10 | P. N. Emas - GO | 0.000 | 1.000 | | 0.000 |
| 11 | Diamantina - MG | 0.000 | 1.000 | | 0.000 |
| 12 | Brasilândia de Minas - MG | 0.000 | 1.000 | | 0.000 |
| 13 | Nova Xavantina - MT | 0.000 | 1.000 | | 0.000 |
| 14 | E. E. Itirapina - SP | 0.500 | 0.500 | | 0.000 |
| 15 | Pratânia - SP | 0.000 | 1.000 | | 0.000 |
| 16 | Barro Alto - GO | 0.000 | 0.900 | | 0.100 |
| 17 | Niquelândia - GO | 1.000 | 0.000 | | 0.000 |
| 18 | Mambaí - GO | 0.714 | 0.286 | | 0.000 |

**Table S14** Number of migrants per generation (*Nem*) based on coalescent analyses performed with microsatellite and *CYB* loci. Migration is from the first population code number towards the second.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Population** | ***Nem* Microsatellites** | | ***Nem* *CYB*** | |
| M21 | 3.046 | 168.251 | |
| M31 | 2.783 | 36.697 | |
| M41 | 2.914 | 288.937 | |
| M51 | 3.070 | 562.969 | |
| M61 | 2.893 | 465.572 | |
| M71 | 3.133 | 561.659 | |
| M81 | 2.949 | 218.333 | |
| M91 | 3.242 | 553.433 | |
| M101 | 3.047 | 202.237 | |
| M111 | 2.828 | 539.048 | |
| M121 | 2.999 | 189.188 | |
| M131 | 2.956 | 45.722 | |
| M141 | 3.006 | 397.987 | |
| M151 | 3.169 | 469.418 | |
| M161 | 3.112 | 313.105 | |
| M171 | 3.154 | 133.321 | |
| M181 | 3.078 | 529.420 | |
| M12 | 18.523 | 0.031 | |
| M32 | 21.366 | 0.259 | |
| M42 | 16.926 | 0.375 | |
| M52 | 21.731 | 0.042 | |
| M62 | 20.037 | 0.360 | |
| M72 | 24.187 | 0.411 | |
| M82 | 23.348 | 0.339 | |
| M92 | 20.493 | 0.419 | |
| M102 | 20.472 | 0.743 | |
| M112 | 21.244 | 0.545 | |
| M122 | 19.361 | 0.044 | |
| M132 | 17.022 | 0.017 | |
| M142 | 19.552 | 0.581 | |
| M152 | 18.922 | 0.385 | |
| M162 | 22.088 | 0.730 | |
| M172 | 21.638 | 0.143 | |
| M182 | 17.832 | 0.417 | |
| M13 | 103.008 | 0.326 | |
| M23 | 112.879 | 0.651 | |
| M43 | 101.474 | 0.858 | |
| M53 | 113.648 | 0.204 | |
| M63 | 100.978 | 0.902 | |
| M73 | 89.181 | 1.407 | |
| M83 | 111.125 | 1.196 | |
| M93 | 125.220 | 0.076 | |
| M103 | 116.336 | 0.870 | |
| M113 | 100.853 | 1.497 | |
| M123 | 94.918 | 1.171 | |
| M133 | 112.100 | 1.060 | |
| M143 | 92.995 | 0.635 | |
| M153 | 98.273 | 1.464 | |
| M163 | 113.217 | 0.933 | |
| M173 | 102.029 | 1.326 | |
| M183 | 95.650 | 0.164 | |
| M14 | 87.284 | 1.418 | |
| M24 | 80.216 | 2.679 | |
| M34 | 89.808 | 0.573 | |
| M54 | 80.630 | 4.111 | |
| M64 | 92.459 | 3.107 | |
| M74 | 96.151 | 2.342 | |
| M84 | 81.281 | 2.716 | |
| M94 | 103.604 | 2.462 | |
| M104 | 91.673 | 3.975 | |
| M114 | 100.735 | 3.092 | |
| M124 | 91.057 | 3.278 | |
| M134 | 95.924 | 0.797 | |
| M144 | 91.388 | 1.657 | |
| M154 | 96.221 | 3.035 | |
| M164 | 91.846 | 1.162 | |
| M174 | 91.868 | 1.600 | |
| M184 | 88.391 | 2.267 | |
| M15 | 91.743 | 0.337 | |
| M25 | 100.616 | 0.347 | |
| M35 | 87.155 | 0.566 | |
| M45 | 93.562 | 0.490 | |
| M65 | 88.996 | 0.593 | |
| M75 | 86.688 | 0.061 | |
| M85 | 96.465 | 0.477 | |
| M95 | 83.769 | 0.648 | |
| M105 | 87.663 | 0.590 | |
| M115 | 93.947 | 0.133 | |
| M125 | 92.633 | 0.234 | |
| M135 | 85.781 | 0.046 | |
| M145 | 90.319 | 0.124 | |
| M155 | 88.803 | 0.227 | |
| M165 | 77.314 | 0.195 | |
| M175 | 95.075 | 0.152 | |
| M185 | 99.075 | 0.148 | |
| M16 | 17.000 | 0.030 | |
| M26 | 16.448 | 0.150 | |
| M36 | 16.441 | 0.854 | |
| M46 | 17.020 | 0.078 | |
| M56 | 16.391 | 0.267 | |
| M76 | 17.303 | 0.536 | |
| M86 | 16.212 | 0.869 | |
| M96 | 16.298 | 0.256 | |
| M106 | 15.295 | 0.979 | |
| M116 | 15.747 | 0.659 | |
| M126 | 14.502 | 0.918 | |
| M136 | 16.710 | 0.760 | |
| M146 | 17.917 | 0.058 | |
| M156 | 15.834 | 0.215 | |
| M166 | 17.345 | 0.914 | |
| M176 | 16.481 | 0.882 | |
| M186 | 16.684 | 0.305 | |
| M17 | 77.540 | 3.527 | |
| M27 | 82.766 | 7.134 | |
| M37 | 91.879 | 6.625 | |
| M47 | 75.253 | 2.596 | |
| M57 | 88.839 | 6.539 | |
| M67 | 76.860 | 4.207 | |
| M87 | 85.628 | 6.408 | |
| M97 | 91.514 | 2.918 | |
| M107 | 83.549 | 0.227 | |
| M117 | 77.164 | 5.588 | |
| M127 | 79.438 | 1.832 | |
| M137 | 83.596 | 5.441 | |
| M147 | 86.635 | 4.677 | |
| M157 | 78.769 | 7.986 | |
| M167 | 86.465 | 2.958 | |
| M177 | 79.515 | 5.656 | |
| M187 | 80.632 | 4.550 | |
| M18 | 29.098 | 0.390 | |
| M28 | 33.707 | 0.239 | |
| M38 | 35.542 | 1.689 | |
| M48 | 32.875 | 0.086 | |
| M58 | 38.182 | 0.265 | |
| M68 | 30.507 | 0.666 | |
| M78 | 37.060 | 1.606 | |
| M98 | 34.997 | 1.581 | |
| M108 | 36.398 | 1.464 | |
| M118 | 31.402 | 1.404 | |
| M128 | 35.569 | 0.493 | |
| M138 | 36.017 | 0.381 | |
| M148 | 34.879 | 0.219 | |
| M158 | 30.564 | 1.532 | |
| M168 | 36.069 | 0.158 | |
| M178 | 34.168 | 1.327 | |
| M188 | 26.428 | 0.844 | |
| M19 | 63.180 | 44.448 | |
| M29 | 57.518 | 188.059 | |
| M39 | 62.272 | 3.541 | |
| M49 | 65.076 | 218.393 | |
| M59 | 65.360 | 208.846 | |
| M69 | 57.193 | 77.845 | |
| M79 | 67.946 | 169.145 | |
| M89 | 58.878 | 215.259 | |
| M109 | 62.238 | 146.315 | |
| M119 | 54.841 | 217.587 | |
| M129 | 59.551 | 20.244 | |
| M139 | 64.650 | 116.129 | |
| M149 | 52.347 | 200.600 | |
| M159 | 60.854 | 13.274 | |
| M169 | 75.550 | 12.346 | |
| M179 | 60.621 | 21.502 | |
| M189 | 58.654 | 25.075 | |
| M110 | 53.117 | 3.408 | |
| M210 | 39.181 | 1.241 | |
| M310 | 50.814 | 5.132 | |
| M410 | 41.375 | 0.191 | |
| M510 | 47.233 | 5.170 | |
| M610 | 39.503 | 0.916 | |
| M710 | 51.899 | 5.223 | |
| M810 | 47.338 | 3.625 | |
| M910 | 46.802 | 1.803 | |
| M1110 | 44.265 | 1.064 | |
| M1210 | 46.283 | 0.443 | |
| M1310 | 47.656 | 1.278 | |
| M1410 | 50.529 | 0.133 | |
| M1510 | 51.381 | 0.206 | |
| M1610 | 46.750 | 4.767 | |
| M1710 | 48.476 | 3.380 | |
| M1810 | 46.875 | 1.188 | |
| M111 | 42.818 | 0.693 | |
| M211 | 42.835 | 0.017 | |
| M311 | 43.979 | 0.699 | |
| M411 | 41.007 | 0.894 | |
| M511 | 34.806 | 0.852 | |
| M611 | 49.753 | 0.013 | |
| M711 | 44.731 | 0.223 | |
| M811 | 41.291 | 0.091 | |
| M911 | 38.379 | 0.150 | |
| M1011 | 45.212 | 0.790 | |
| M1211 | 46.198 | 0.331 | |
| M1311 | 42.064 | 0.875 | |
| M1411 | 46.624 | 0.286 | |
| M1511 | 42.841 | 0.708 | |
| M1611 | 40.548 | 0.866 | |
| M1711 | 42.441 | 0.288 | |
| M1811 | 42.651 | 0.618 | |
| M112 | 6.745 | 4.010 | |
| M212 | 7.408 | 111.995 | |
| M312 | 7.293 | 8.679 | |
| M412 | 7.054 | 118.129 | |
| M512 | 7.615 | 100.076 | |
| M612 | 7.033 | 116.591 | |
| M712 | 6.880 | 97.404 | |
| M812 | 6.553 | 31.251 | |
| M912 | 7.246 | 18.165 | |
| M1012 | 6.577 | 69.584 | |
| M1112 | 7.775 | 114.141 | |
| M1312 | 6.953 | 120.376 | |
| M1412 | 7.460 | 44.193 | |
| M1512 | 6.617 | 14.293 | |
| M1612 | 7.322 | 19.101 | |
| M1712 | 6.261 | 24.482 | |
| M1812 | 5.979 | 63.590 | |
| M113 | 102.831 | 16.967 | |
| M213 | 95.489 | 0.522 | |
| M313 | 101.880 | 18.486 | |
| M413 | 90.260 | 9.798 | |
| M513 | 91.906 | 15.684 | |
| M613 | 89.517 | 7.408 | |
| M713 | 83.387 | 8.399 | |
| M813 | 98.098 | 6.161 | |
| M913 | 98.071 | 8.140 | |
| M1013 | 100.632 | 17.383 | |
| M1113 | 91.278 | 4.432 | |
| M1213 | 94.415 | 4.749 | |
| M1413 | 97.944 | 2.581 | |
| M1513 | 103.794 | 15.037 | |
| M1613 | 97.214 | 1.525 | |
| M1713 | 98.751 | 4.775 | |
| M1813 | 91.735 | 2.675 | |
| M114 | 110.813 | 9.358 | |
| M214 | 94.250 | 16.241 | |
| M314 | 103.459 | 7.692 | |
| M414 | 106.645 | 5.771 | |
| M514 | 92.198 | 5.126 | |
| M614 | 94.601 | 10.636 | |
| M714 | 92.741 | 3.636 | |
| M814 | 92.332 | 4.734 | |
| M914 | 105.456 | 4.919 | |
| M1014 | 91.367 | 7.598 | |
| M1114 | 91.389 | 0.266 | |
| M1214 | 105.149 | 2.296 | |
| M1314 | 97.259 | 0.465 | |
| M1514 | 104.223 | 10.667 | |
| M1614 | 79.377 | 8.756 | |
| M1714 | 80.115 | 0.091 | |
| M1814 | 94.026 | 17.796 | |
| M115 | 55.634 | 1.026 | |
| M215 | 60.973 | 1.171 | |
| M315 | 55.835 | 0.214 | |
| M415 | 66.261 | 1.210 | |
| M515 | 67.821 | 3.431 | |
| M615 | 59.625 | 3.731 | |
| M715 | 71.748 | 3.324 | |
| M815 | 61.754 | 3.449 | |
| M915 | 57.266 | 3.219 | |
| M1015 | 61.213 | 1.840 | |
| M1115 | 61.966 | 3.316 | |
| M1215 | 65.182 | 2.966 | |
| M1315 | 62.236 | 3.696 | |
| M1415 | 56.205 | 2.492 | |
| M1615 | 60.484 | 1.555 | |
| M1715 | 60.971 | 2.357 | |
| M1815 | 62.495 | 3.596 | |
| M116 | 1.159 | 28.170 | |
| M216 | 1.252 | 0.180 | |
| M316 | 1.196 | 4.519 | |
| M416 | 1.368 | 25.728 | |
| M516 | 1.309 | 22.813 | |
| M616 | 1.191 | 22.492 | |
| M716 | 1.265 | 5.074 | |
| M816 | 1.308 | 3.314 | |
| M916 | 1.339 | 13.243 | |
| M1016 | 1.313 | 11.384 | |
| M1116 | 1.287 | 3.054 | |
| M1216 | 1.179 | 30.966 | |
| M1316 | 1.304 | 30.976 | |
| M1416 | 1.344 | 7.337 | |
| M1516 | 1.279 | 3.701 | |
| M1716 | 1.070 | 29.702 | |
| M1816 | 1.398 | 2.206 | |
| M117 | 7.744 | 0.055 | |
| M217 | 8.021 | 0.325 | |
| M317 | 7.890 | 0.792 | |
| M417 | 8.218 | 0.565 | |
| M517 | 7.271 | 0.034 | |
| M617 | 7.414 | 0.601 | |
| M717 | 9.178 | 0.724 | |
| M817 | 8.955 | 0.123 | |
| M917 | 7.045 | 0.742 | |
| M1017 | 9.653 | 0.024 | |
| M1117 | 8.698 | 0.586 | |
| M1217 | 8.862 | 0.357 | |
| M1317 | 6.970 | 0.584 | |
| M1417 | 8.076 | 0.080 | |
| M1517 | 8.863 | 0.637 | |
| M1617 | 8.790 | 0.685 | |
| M1817 | 9.313 | 0.179 | |
| M118 | 0.138 | 72.027 | |
| M218 | 0.131 | 103.801 | |
| M318 | 0.146 | 34.785 | |
| M418 | 0.146 | 49.786 | |
| M518 | 0.133 | 109.764 | |
| M618 | 0.143 | 37.760 | |
| M718 | 0.148 | 57.180 | |
| M818 | 0.125 | 5.185 | |
| M918 | 0.145 | 15.303 | |
| M1018 | 0.128 | 124.196 | |
| M1118 | 0.139 | 20.477 | |
| M1218 | 0.150 | 23.632 | |
| M1318 | 0.135 | 29.959 | |
| M1418 | 0.143 | 64.926 | |
| M1518 | 0.128 | 26.237 | |
| M1618 | 0.134 | 63.679 | |
| M1718 | 0.139 | 19.703 | |

**Table S15** Uncertainty of the modeling components from ecological niche modeling predictions for *Glossophaga soricina* based on hierarchical ANOVA. SS: sum of square.

|  |  |  |  |
| --- | --- | --- | --- |
| **Source of variation** | **Median SS** | **Minimun** | **Maximum** |
| **TIME** | 0.320 | 0.000 | 0.899 |
| **AOGCM** | 0.369 | 0.016 | 0.946 |
| **ENM** | 0.184 | 0.002 | 0.880 |
| **AOGCM x ENM** | 0.055 | 0.000 | 0.206 |

**Table S16.** Model selection of the competing hypotheses to explain the pattern of variation in genetic diversity (*He*), allelic richness (*AR*), inbreeding coefficient (*f*), number of haplotypes (*k*), haplotype diversity (*h*) and nucleotide diversity (*π*) in 18 populations of *Glossophaga soricina* sampled in the Brazilian Cerrado. Analyses were performed using 2 km and 5 km buffers. N = number of parameters that consider the β of explanatory variables and the parameters of residuals distribution; AICc = AIC corrected by sample size and number of parameters in the model; wAIC = Akaike’s weight of evidence. Models with **∆**AICc > 2.0 and p < 0.05 are marked in bold.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **∆AICc** | | **wAIC** | **n** | ***β*** | **P** | **Model** | **∆AICc** | **wAIC** | **n** | ***β*** | **P** |
| **2 km – *He*** | | | | | | | **5 km – *He*** | | | | | |
| **Matrix type** | **0.0** | | **0.919** | **3** | **-0.0270** | **<0.001** | **Matrix type** | **0.0** | **0.918** | **3** | **-0.0401** | **<0.001** |
| Suitability 0K+Matrix type | 5.6 | | 0.057 | 4 | -0.0283 | 0.494 | Suitability 0K+Matrix type | 5.6 | 0.057 | 4 | 0.0386 | 0.637 |
| Stability+Matrix type | 9.0 | | 0.010 | 4 | -0.0255 | 0.740 | Stability+Matrix type | 9.0 | 0.010 | 4 | 0.0421 | 0.508 |
| *Ne*(contemporary)+Matrix type | 10.4 | | 0.005 | 4 | -0.0272 | 0.589 | % Natural vegetation remnants | 9.9 | 0.007 | 4 | 0.0413 | 0.786 |
| *Ne*(historical)+Matrix type | 10.5 | | 0.005 | 4 | -0.0270 | 0.949 | *Ne*(contemporary)+Matrix type | 10.4 | 0.005 | 4 | 0.0389 | 0.717 |
| % Natural vegetation remnants | 11.0 | | 0.004 | 4 | -0.0269 | 0.979 | *Ne*(historical)+Matrix type | 11.0 | 0.004 | 4 | 0.0401 | 0.940 |
| All variables | 45.2 | | <0.001 | 8 | -0.0272 | 0.963 | All variables | 44.4 | <0.001 | 8 | 0.0406 | 0.969 |
| **2 km - *f*** | | | | | | | **5 km - *f*** | | | | | |
| **Matrix type** | **0.0** | **0.712** | | **3** | **0.0397** | **<0.001** | **Matrix type** | **0.0** | **0.735** | **3** | **0.2068** | **<0.001** |
| Suitability 0K+Matrix type | 3.0 | 0.160 | | 4 | 0.0355 | 0.550 | Suitability 0K+Matrix type | 3.4 | 0.165 | 4 | 0.2023 | 0.671 |
| % Natural vegetation remnants | 4.8 | 0.065 | | 4 | 0.0744 | 0.047 | % Natural vegetation remnants | 4.6 | 0.068 | 4 | 0.2323 | 0.071 |
| Stability+Matrix type | 6.7 | 0.026 | | 4 | 0.0424 | 0.868 | *Ne*(historical)+Matrix type | 6.7 | 0.026 | 4 | 0.2075 | 0.115 |
| *Ne*(historical)+Matrix type | 6.8 | 0.024 | | 4 | 0.0396 | 0.173 | Stability+Matrix type | 6.8 | 0.024 | 4 | 0.2110 | 0.687 |
| *Ne*(contemporary)+Matrix type | 7.9 | 0.014 | | 4 | 0.0404 | 0.609 | *Ne*(contemporary)+Matrix type | 7.9 | 0.014 | 4 | 0.2165 | 0.378 |
| All variables | 28.2 | <0.001 | | 8 | 0.0711 | 0.175 | All variables | 29.2 | <0.001 | 8 | 0.2230 | 0.256 |
| **2 km - *AR*** | | | | | | | **5 km - *AR*** | | | | | |
| **Matrix type** | **0.0** | | **0.699** | **3** | **-0.2402** | **<0.001** | **Matrix type** | **0.0** | **0.693** | **3** | **-0.1518** | **<0.001** |
| Suitability 0K+Matrix type | 2.7 | | 0.178 | 4 | -0.2448 | 0.563 | Suitability 0K+Matrix type | 2.7 | 0.176 | 4 | -0.1604 | 0.550 |
| Stability+Matrix type | 5.3 | | 0.049 | 4 | -0.2244 | 0.406 | Stability+Matrix type | 5.3 | 0.048 | 4 | -0.1391 | 0.364 |
| *Ne*(historical)+Matrix type | 6.0 | | 0.035 | 4 | -0.2402 | 0.096 | *Ne*(historical)+Matrix type | 6.0 | 0.035 | 4 | -0.1508 | 0.115 |
| *Ne*(contemporary)+Matrix type | 6.8 | | 0.023 | 4 | -0.2384 | 0.284 | % Natural vegetation remnants | 6.6 | 0.025 | 4 | -0.1453 | 0.745 |
| % Natural vegetation remnants | 7.5 | | 0.016 | 4 | -0.2424 | 0.912 | *Ne*(contemporary)+Matrix type | 6.8 | 0.023 | 4 | -0.1385 | 0.374 |
| All variables | 28.6 | | <0.001 | 8 | -0.2655 | 0.443 | All variables | 27.9 | <0.001 | 8 | -0.1612 | 0.607 |
| **2 km – *k*** | | | | | | | **5 km – *k*** | | | | | |
| **Matrix type** | **0.0** | | **0.487** | **8** | **-0.2999** | **<0.001** | **Matrix type** | **0.0** | **0.572** | **8** | **-0.3986** | **<0.001** |
| Suitability 0K+Matrix type | 1.7 | | 0.206 | 4 | 3.0030 | 0.757 | Suitability 0K+Matrix type | 2.5 | 0.161 | 4 | -0.2435 | 0.771 |
| *Ne*(contemporary)+Matrix type | 2.2 | | 0.161 | 4 | 1.2710 | 0.037 | *Ne*(contemporary)+Matrix type | 3.0 | 0.126 | 4 | -0.1367 | 0.028 |
| % Natural vegetation remnants | 4.4 | | 0.053 | 4 | 2.1850 | 0.159 | % Natural vegetation remnants | 4.2 | 0.068 | 4 | -0.6676 | 0.104 |
| Stability+Matrix type | 5.0 | | 0.039 | 4 | 2.8617 | 0.291 | Stability+Matrix type | 5.8 | 0.031 | 4 | -0.6538 | 0.714 |
| All variables | 5.5 | | 0.032 | 3 | 1.1538 | 0.444 | All variables | 6.3 | 0.025 | 3 | -0.9435 | 0.382 |
| *Ne*(historical)+Matrix type | 6.2 | | 0.022 | 4 | 3.5867 | 0.829 | *Ne*(historical)+Matrix type | 7.0 | 0.017 | 4 | 1.3973 | 0.340 |
| **2 km – *h*** | | | | | | | **5 km – *h*** | | | | | |
| **Matrix type** | **0.0** | | **0.937** | **3** | **-0.0065** | **<0.001** | **Matrix type** | **0.0** | **0.935** | **3** | **0.0021** | **<0.001** |
| Suitability 0K+Matrix type | 6.7 | | 0.033 | 4 | -0.0082 | 0.270 | Suitability 0K+Matrix type | 6.7 | 0.033 | 4 | 0.0031 | 0.295 |
| *Ne*(historical)+Matrix type | 8.3 | | 0.015 | 4 | 0.0005 | 0.035 | *Ne*(historical)+Matrix type | 6.8 | 0.030 | 4 | 0.0210 | 0.010 |
| *Ne*(contemporary)+Matrix type | 9.8 | | 0.007 | 4 | -0.0104 | 0.077 | % Natural vegetation remnants | 9.8 | 0.007 | 4 | -0.0104 | 0.354 |
| Stability+Matrix type | 10.8 | | 0.004 | 4 | -0.0061 | 0.834 | *Ne*(contemporary)+Matrix type | 10.0 | 0.006 | 4 | -0.0019 | 0.103 |
| % Natural vegetation remnants | 11.1 | | 0.004 | 4 | -0.0070 | 0.551 | Stability+Matrix type | 10.8 | 0.004 | 4 | 0.0036 | 0.724 |
| All variables | 48.6 | | <0.001 | 8 | -0.0002 | 0.219 | All variables | 47.8 | <0.001 | 8 | 0.0401 | 0.028 |
| **2 km – *π*** | | | | | | | **5 km – *π*** | | | | | |
| **Matrix type** | **0.0** | | **0.780** | **3** | **-0.0236** | **<0.001** | **Matrix type** | **0.0** | **0.779** | **3** | **-0.1573** | **<0.001** |
| Suitability 0K+Matrix type | 3.4 | | 0.142 | 4 | -0.0297 | 0.841 | Suitability 0K+Matrix type | 3.4 | 0.142 | 4 | -0.1653 | 0.678 |
| Stability+Matrix type | 6.8 | | 0.026 | 4 | -0.0199 | 0.848 | % Natural vegetation remnants | 6.8 | 0.026 | 4 | -0.1666 | 0.331 |
| % Natural vegetation remnants | 6.9 | | 0.025 | 4 | -0.0440 | 0.218 | Stability+Matrix type | 6.9 | 0.025 | 4 | -0.1567 | 0.984 |
| *Ne*(contemporary)+Matrix type | 8.0 | | 0.015 | 4 | -0.0393 | 0.500 | *Ne*(contemporary)+Matrix type | 8.0 | 0.015 | 4 | -0.1546 | 0.531 |
| *Ne*(historical)+Matrix type | 8.2 | | 0.013 | 4 | -0.0122 | 0.516 | *Ne*(historical)+Matrix type | 8.2 | 0.013 | 4 | -0.1537 | 0.943 |
| All variables | 32.3 | | <0.001 | 8 | -0.0173 | 0.805 | All variables | 32.0 | <0.001 | 8 | -0.2200 | 0.880 |

**Table S17**. Model selection of competing resistance surfaces and spatial distance to explain the genetic differentiation among 18 populations of *Glossophaga soricina* sampled in the Brazilian Cerrado. Optimization of the resistance surface. using landscape resistance. climatic suitability and geographical distance as predictor variables and pairwise *FST*, Jost’s D and *G’ST* as response variables. R2m. marginal coefficient of determination and describes the percentage of the variance explained by fixed factors alone. R2c, conditional coefficient of determination, describes the percentage of variation explained by fixed and random factors together. AICc = AIC corrected by sample size and number of parameters in the model; wAIC = Akaike’s weight of evidence. Models with **∆**AICc > 2.0 are marked in bold.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Genetic parameter** | **Surface** | **k** | **AICc** | **∆AICc** | ***w*AICc** | **R2m** | **R2c** |
| ***FST - CYB*** | **Null** | **1** | **1046.101** | **0.000** | **0.701** | **0.000** | **0.252** |
| Distance | 2 | 1048.320 | 2.220 | 0.231 | 0.007 | 0.241 |
| Landscape | 4 | 1051.117 | 5.016 | 0.057 | 0.093 | 0.265 |
|  | Suitability | 4 | 1054.529 | 8.428 | 0.010 | 0.015 | 0.250 |
|  | **Null** | **1** | **-635.369** | **0.000** | **0.498** | **0.000** | **0.952** |
| ***FST -* Microsatellite** | **Distance** | **2** | **-635.152** | **0.217** | **0.447** | **0.004** | **0.953** |
|  | Landscape | 4 | -629.880 | 5.489 | 0.032 | 0.005 | 0.953 |
|  | Suitability | 4 | -629.236 | 6.133 | 0.023 | 0.005 | 0.953 |
| **D Jost** | **Null** | **2** | **-597.417** | **0.000** | **0.677** | **0.003** | **0.980** |
| **Distance** | **1** | **-595.493** | **1.925** | **0.259** | **0.000** | **0.979** |
| Landscape | 4 | -591.437 | 5.980 | 0.034 | 0.003 | 0.980 |
|  | Suitability | 4 | -591.173 | 6.244 | 0.030 | 0.003 | 0.980 |
| ***G’ST*** | **Null** | **2** | **-491.539** | **0.000** | **0.553** | **0.003** | **0.972** |
| **Distance** | **1** | **-490.906** | **0.633** | **0.403** | **0.000** | **0.971** |
| Landscape | 4 | -485.367 | 6.172 | 0.025 | 0.005 | 0.972 |
| Suitability | 4 | -484.849 | 6.690 | 0.019 | 0.008 | 0.972 |

**Table S18.** Discontinuity based on Delanauy triangulation for 18 populations of *Glossophaga soricina*. Below diagonal, discontinuity based on microsatellite loci, and above diagonal based on *CYB*. In bold, the highest 10% values.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **1** | 0.000 | 0.002 | 0.000 | 0.020 | 0.000 | 0.000 | 0.000 | 0.006 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.034 | 0.003 |
| **2** | 0.034 | 0.000 | 0.002 | 0.000 | 0.003 | 0.003 | 0.004 | 0.000 | 0.004 | 0.002 | 0.001 | 0.002 | 0.002 | 0.000 | 0.001 | 0.007 | 0.005 | 0.000 |
| **3** | 0.003 | 0.015 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.006 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.007 |
| **4** | 0.006 | 0.007 | 0.004 | 0.000 | 0.013 | **0.306** | 0.031 | 0.000 | 0.015 | 0.016 | 0.011 | 0.022 | 0.012 | 0.000 | 0.009 | 0.037 | 0.000 | 0.000 |
| **5** | 0.003 | 0.013 | 0.007 | 0.004 | 0.000 | 0.000 | 0.000 | 0.085 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | **0.139** | 0.006 |
| **6** | 0.069 | 0.032 | 0.007 | 0.018 | 0.003 | 0.000 | 0.000 | 0.046 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | **0.166** | 0.004 |
| **7** | 0.081 | 0.002 | 0.007 | **0.163** | 0.004 | 0.008 | 0.000 | 0.052 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | **0.270** | 0.006 |
| **8** | 0.004 | 0.000 | 0.001 | 0.000 | 0.002 | 0.006 | 0.002 | 0.000 | 0.021 | 0.019 | 0.068 | 0.052 | 0.032 | 0.001 | 0.026 | 0.017 | 0.000 | 0.000 |
| **9** | 0.001 | 0.018 | 0.004 | 0.000 | 0.002 | 0.015 | 0.008 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.048 | 0.020 |
| **10** | 0.002 | 0.004 | 0.001 | 0.002 | 0.001 | 0.011 | 0.001 | 0.001 | 0.003 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.000 | 0.045 | 0.003 |
| **11** | 0.005 | 0.010 | 0.001 | 0.001 | 0.001 | 0.010 | 0.001 | 0.004 | 0.008 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.000 | 0.071 | 0.003 |
| **12** | 0.034 | 0.025 | 0.009 | 0.007 | 0.001 | 0.006 | 0.016 | 0.005 | 0.027 | 0.005 | 0.004 | 0.000 | 0.000 | 0.002 | 0.000 | 0.000 | **0.104** | 0.006 |
| **13** | 0.004 | 0.016 | 0.000 | 0.001 | 0.001 | 0.013 | 0.003 | 0.003 | 0.005 | 0.002 | 0.001 | 0.006 | 0.000 | 0.001 | 0.000 | 0.000 | 0.090 | 0.002 |
| **14** | 0.000 | 0.003 | 0.000 | 0.001 | 0.000 | 0.009 | 0.000 | 0.001 | 0.000 | 0.002 | 0.004 | 0.008 | 0.001 | 0.000 | 0.009 | 0.002 | 0.001 | 0.000 |
| **15** | 0.002 | 0.004 | 0.002 | 0.004 | 0.002 | 0.007 | 0.000 | 0.001 | 0.002 | 0.002 | 0.003 | 0.001 | 0.000 | 0.001 | 0.000 | 0.000 | 0.041 | 0.002 |
| **16** | 0.007 | 0.035 | 0.002 | 0.001 | 0.003 | 0.036 | 0.006 | 0.002 | 0.007 | 0.004 | 0.002 | 0.016 | 0.004 | 0.002 | 0.002 | 0.000 | **0.174** | 0.006 |
| **17** | 0.003 | 0.096 | 0.002 | 0.002 | 0.002 | 0.029 | 0.008 | 0.004 | 0.003 | 0.003 | 0.004 | 0.019 | 0.005 | 0.002 | 0.003 | 0.003 | 0.000 | 0.001 |
| **18** | 0.013 | **0.199** | **0.343** | 0.091 | 0.091 | 0.094 | **0**.**163** | 0.060 | **0.451** | 0.036 | 0.059 | 0.001 | 0.041 | 0.038 | 0.032 | 0.094 | 0.012 | 0.000 |