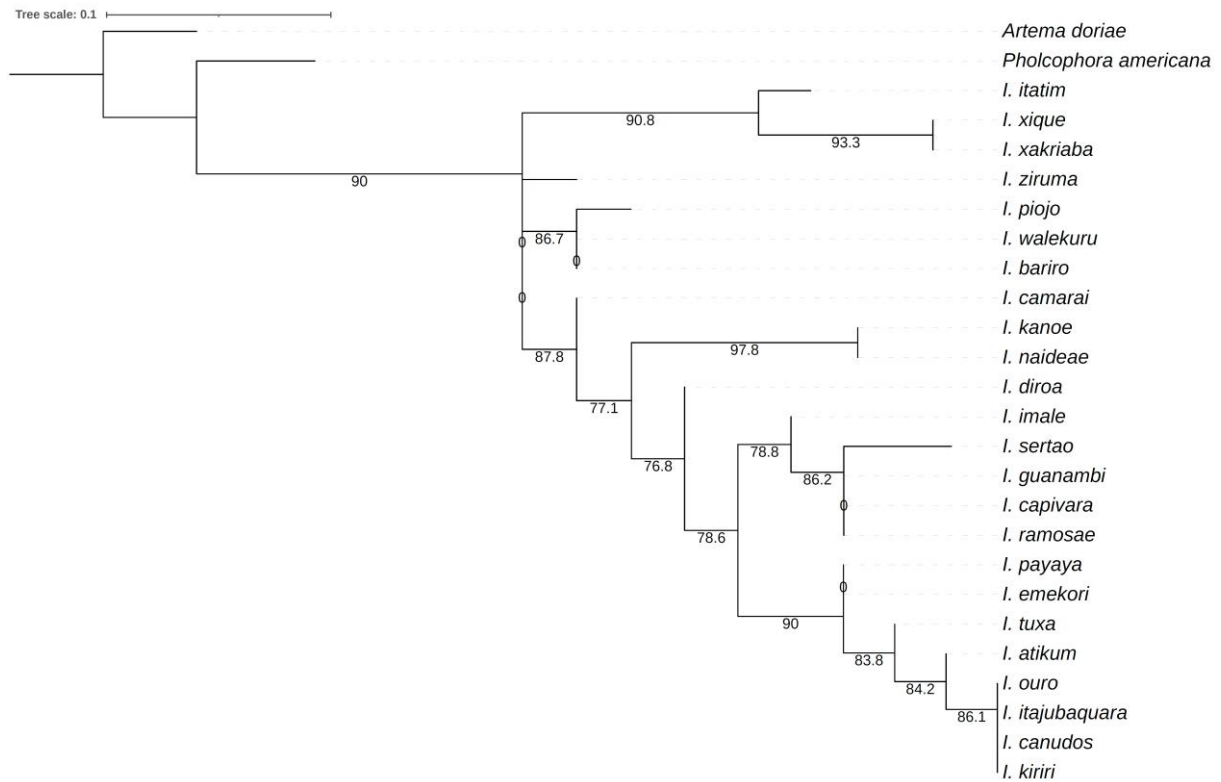


## Diamonds in the rough: *Ibotyporanga* (Araneae, Pholcidae) spiders in semi-arid Neotropical environments

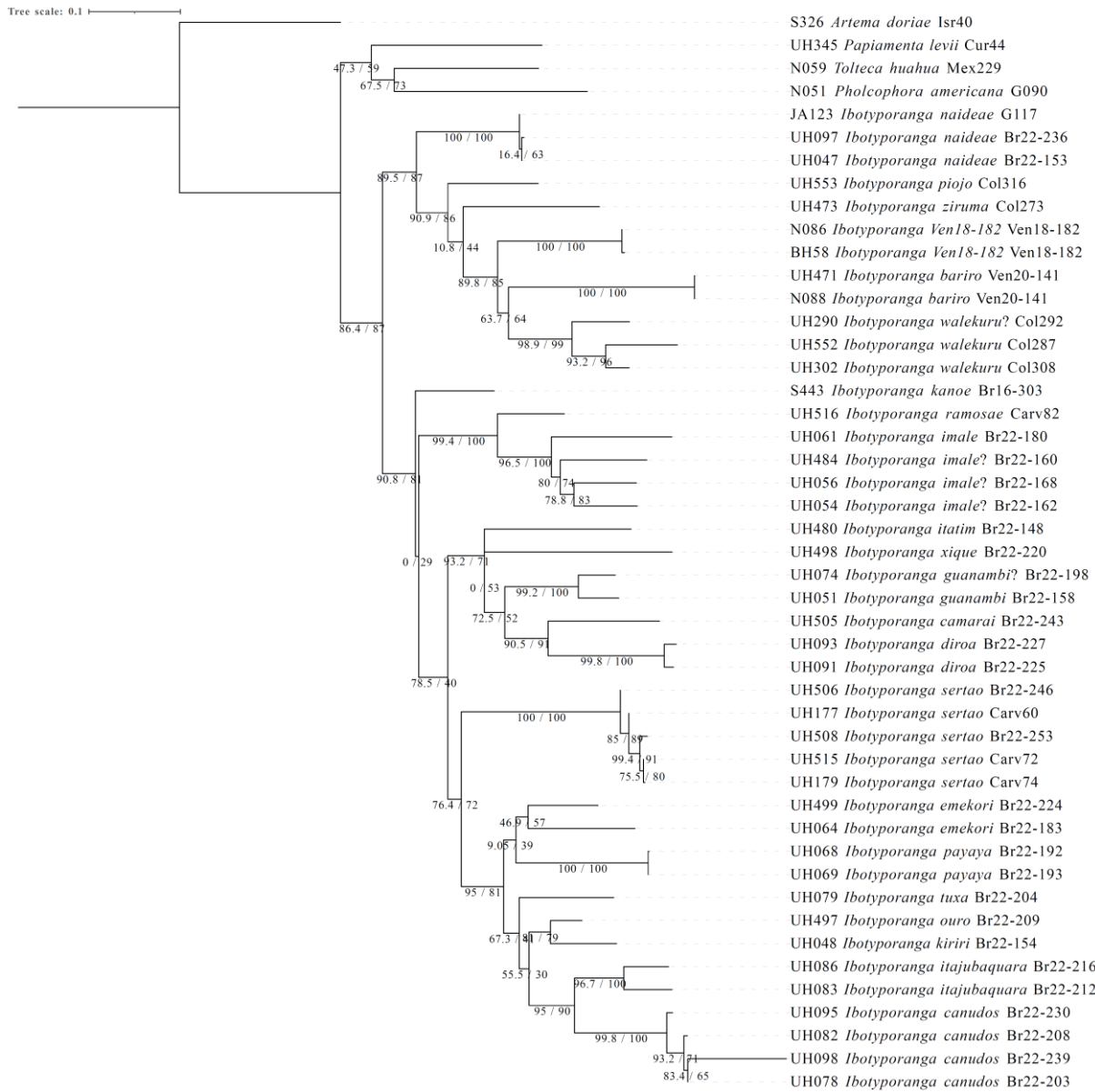
Bernhard A. HUBER, Guanliang MENG, Jiří KRÁL, Ivalú M. ÁVILA HERRERA, Leonardo S. CARVALHO

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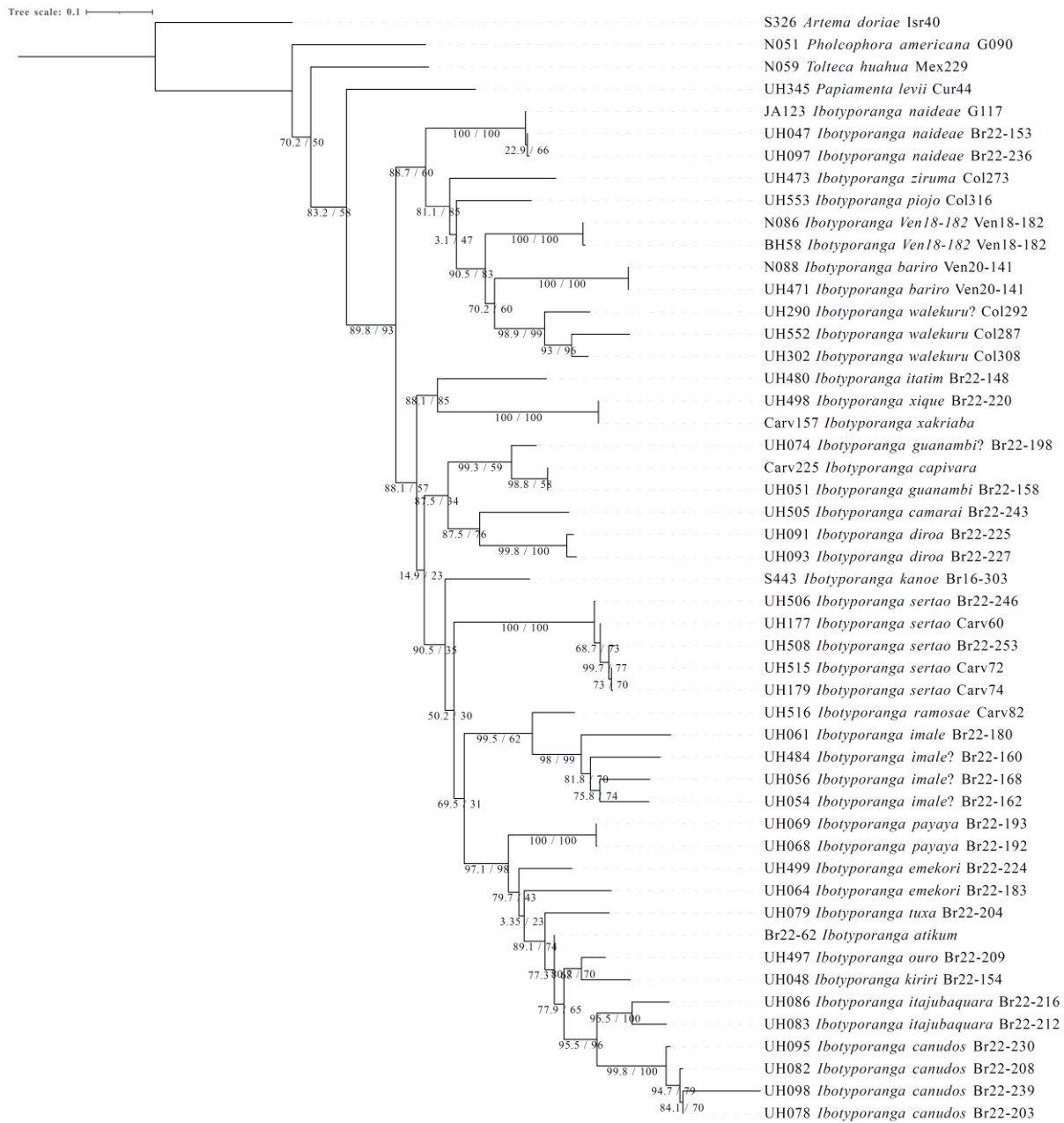
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**Fig. S1.** ML tree of morphological data

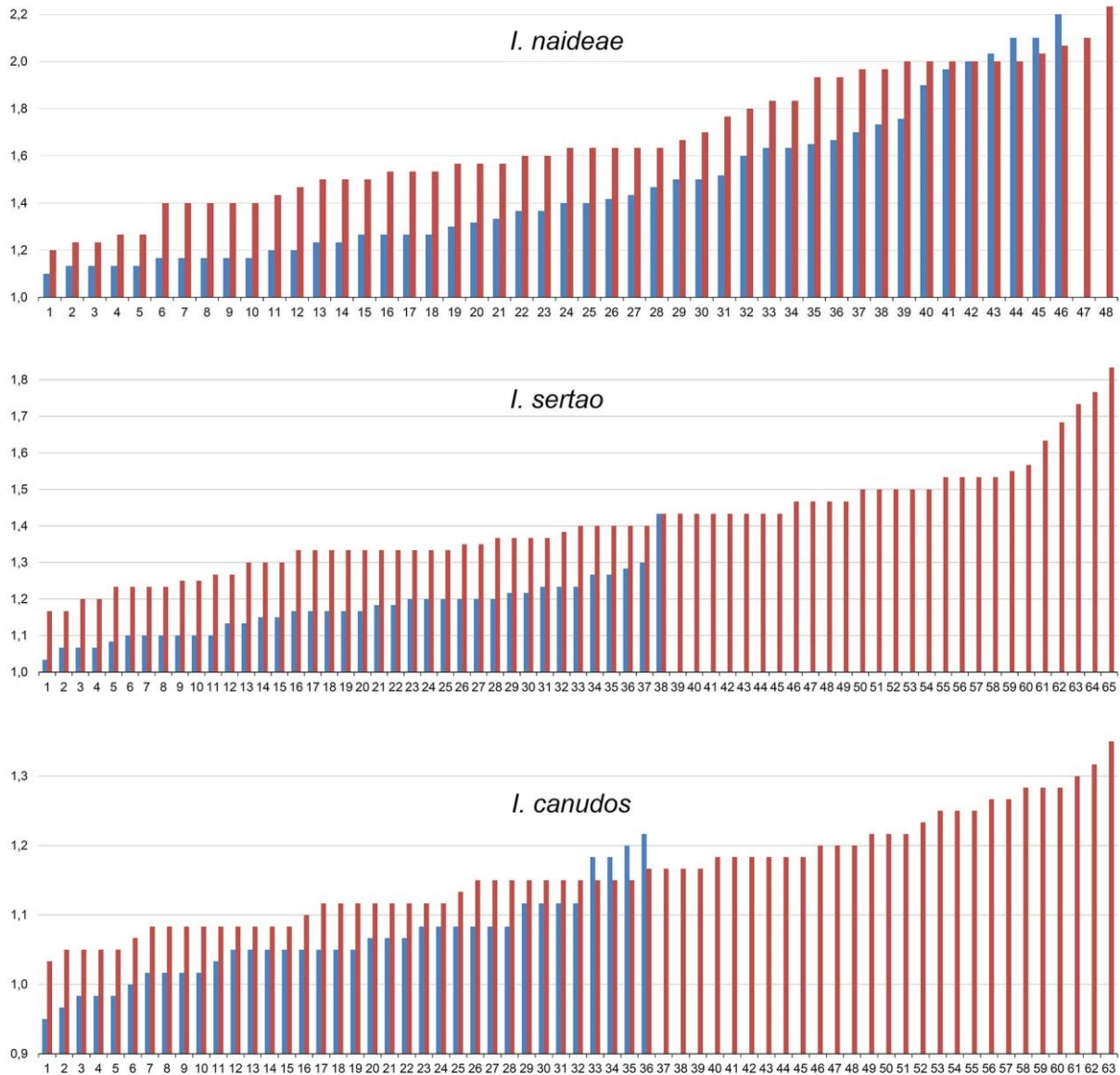
**Fig. S1.** Maximum likelihood tree of morphological data, based on the matrix in Appendix 1. The tree was constructed with IQ-TREE (version 2.2.6) (-pers 0.2 -nstop 500 -B 2000 -T 1 --runs 10), with the best-fit model MK+FQ+ASC identified by ModelFinder Plus (-m MFP -st MORPH). The branch values on the tree are SH-aLRT support (%) (-bnni --alrt 2000).

**Fig. S2.** ML tree of CO1 data

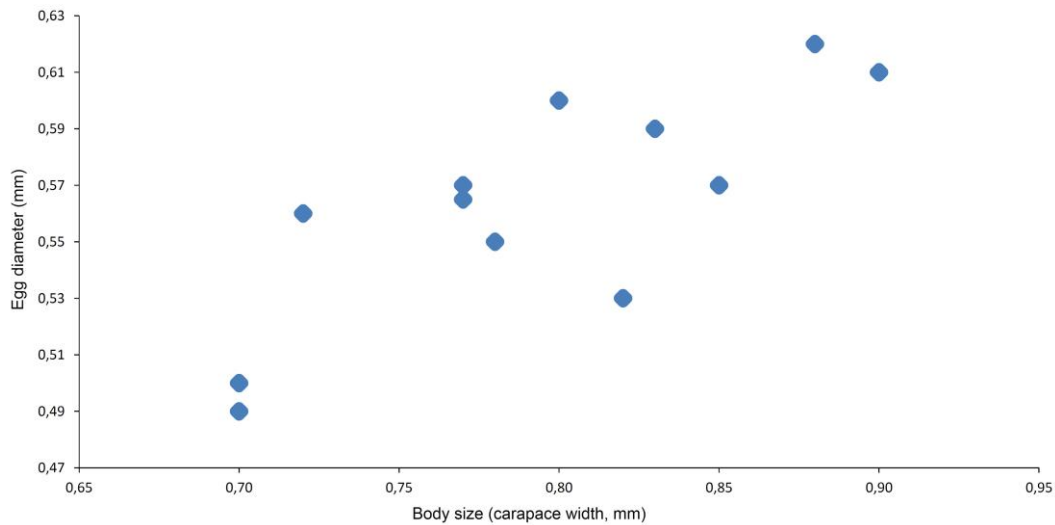
**Fig. S2.** Maximum likelihood tree of CO1 data. The tree was constructed with IQ-TREE (version 2.2.6) (-pers 0.2 -nstop 500 -T 2 --runs 10), with the best-fit model GTR+F+I+R4 identified by ModelFinder Plus (-m MFP). The branch values on the tree are SH-aLRT support (%) and ultrafast bootstrap support (%) (-B 2000 -bnni --alrt 2000), respectively.

**Fig. S3.** ML tree of combined morphological + molecular data

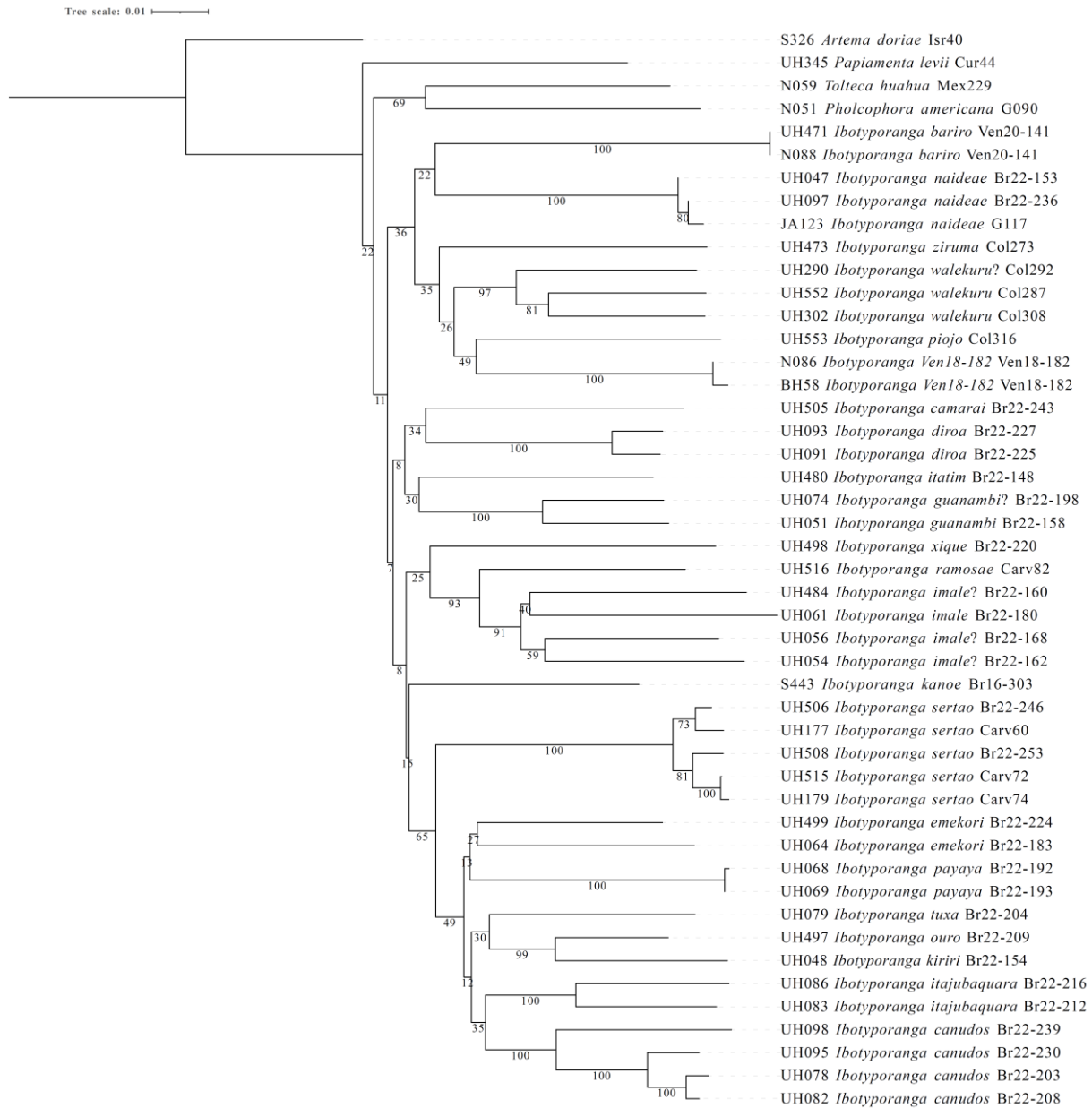
**Fig. S3.** Maximum likelihood tree of combined morphological data (matrix in Appendix 1) + molecular (CO1) data. The tree was constructed with IQ-TREE (version 2.2.6) (-pers 0.2 -nstop 500 -T 2 --runs 10). Evolutionary models: MK+FQ for the morphological character partition, GTR+F+I+R4 for the CO1 partition. The branch values on the tree are SH-aLRT support (%) and ultrafast bootstrap support (%) (-B 2000 -bnni --alrt 2000), respectively.

**Fig. S4.** Tibia 1 length sexual dimorphism

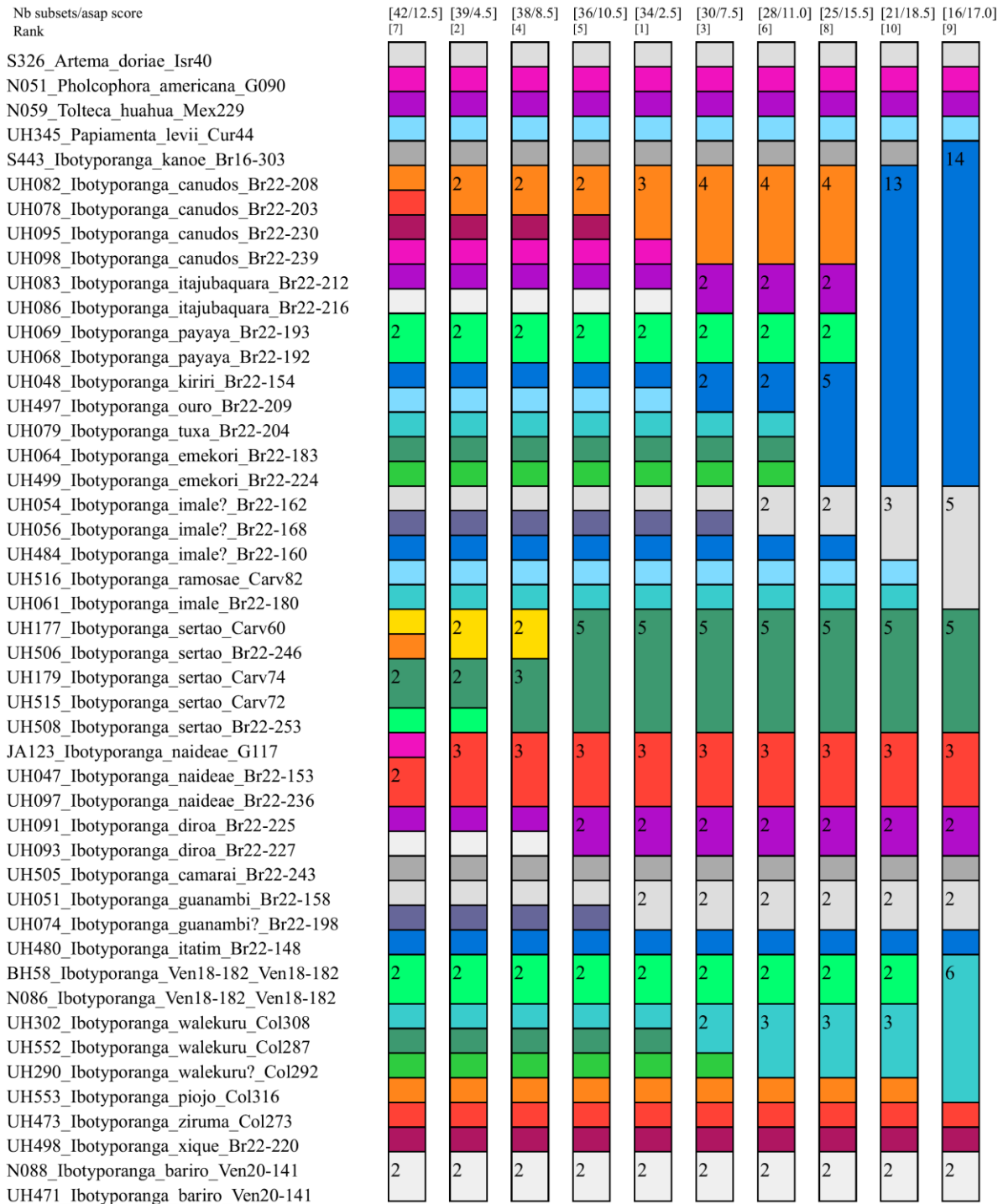
**Fig. S4.** Tibia 1 lengths (y-axis, in mm) in males (blue) and females (red) (specimen count on x axis) of three selected species for which large samples were available. In all three cases, male legs are significantly shorter than female legs (independent samples T-test, two-tailed; *I. naideae*  $P=0.001$ ; other species  $P<0.001$ ).

**Fig. S5.** Body size and egg size

**Fig. S5.** Body size (male carapace width of male holotype in mm) and mean egg diameter (in mm) in 12 species of *Ibotyporanga*. Note positive correlation, as usual for Pholcidae (Huber BA, Eberle J. 2021. Mining a photo library: eggs and egg sacs in a major spider family. *Invertebrate Biology* 140: e12349, 1-13. <https://doi.org/10.1111/ivb.12349>). For individual measurements, see species descriptions of: *I. walekeru* Huber sp. nov., *I. itatim* Huber sp. nov., *I. xique* Huber sp. nov., *I. diroa* Huber & Brescovit, 2003, *I. sertao* Huber sp. nov., *I. imale* Huber sp. nov., *I. guanambi* Huber sp. nov., *I. emekori* Huber & Brescovit, 2003, *I. tuxa* Huber sp. nov., *I. kiriri* Huber sp. nov., *I. ouro* Huber sp. nov., *I. canudos* Huber sp. nov..

**Fig. S6.** NJ tree of CO1 data

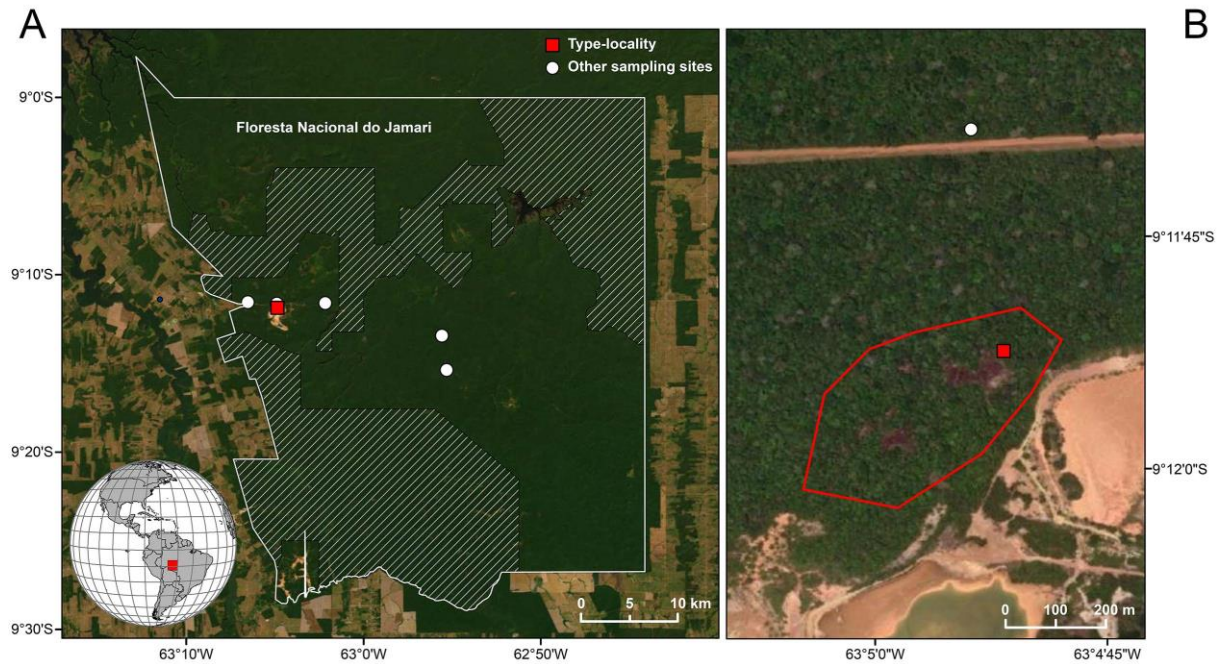
**Fig. S6.** Neighbor joining tree of CO1 data. The tree was constructed with MEGA 11 based on the Kimura 2 parameter model using the Neighbor-joining method. Pairwise deletion strategy was applied to deal with gaps/missing data. The branch values are bootstrap supports calculated from 5000 replicates.

**Fig. S7.** ASAP species delimitation analysis

**Fig. S7.** ASAP species delimitation analysis based on CO1 data. The analysis was performed on the web server <https://bioinfo.mnhn.fr/abi/public/asap/>. The Kimura 2 parameter model was applied. The best ten partitions are shown. The numbers for each column (partition) are: (1) Total number of species as identified by ASAP in the corresponding partition. (2) Score, an indicator of how good a partition is (the lower the score, the better the partition). (3) Rank of the scores. Note that the partition with the lowest (best) score counts 34 species, while only 26 nominal species and one unnamed species are included in the dataset.

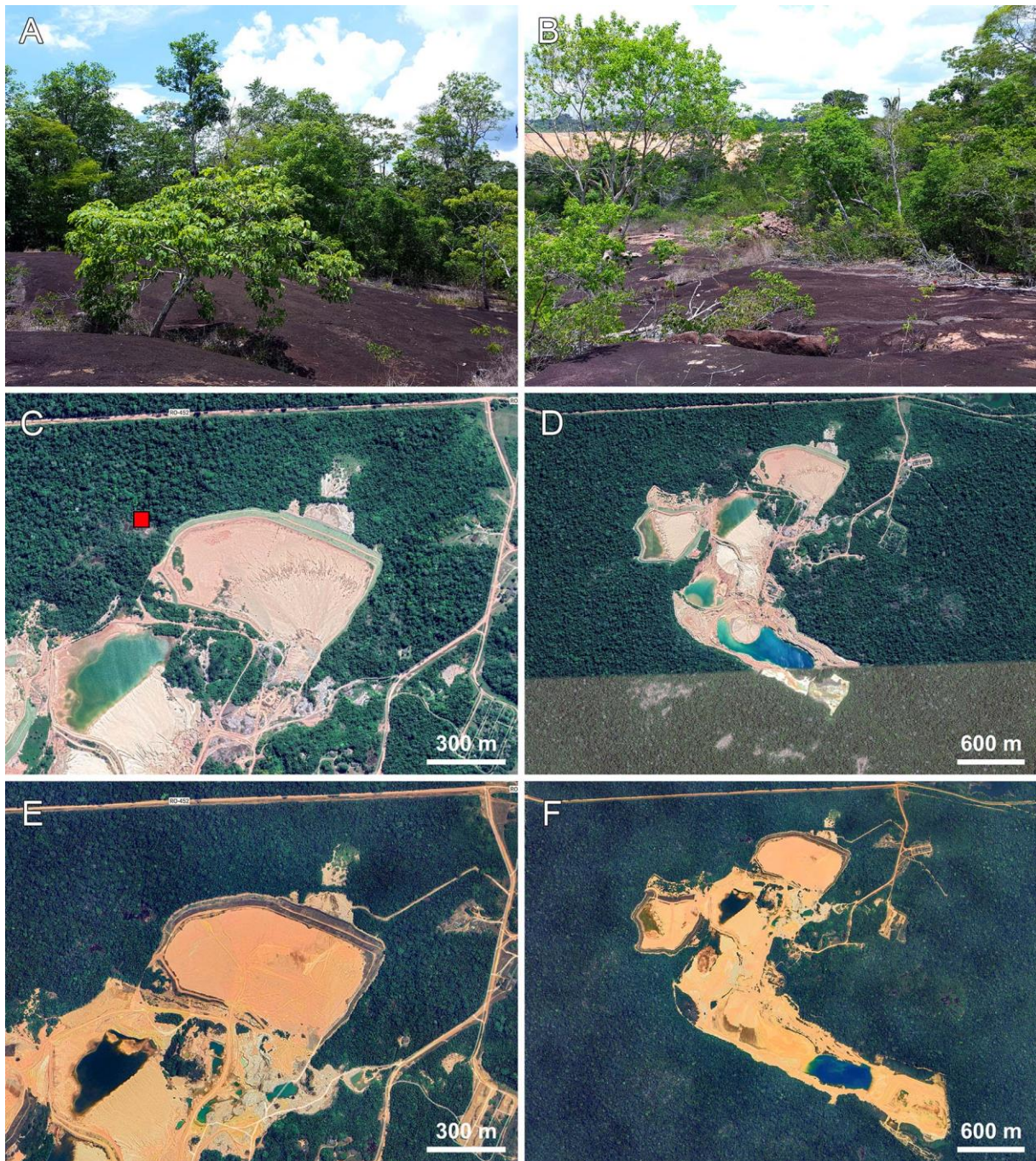


**Fig. S8.** Type locality of *Ibotyporanga kanoe* at Floresta Nacional do Jamari



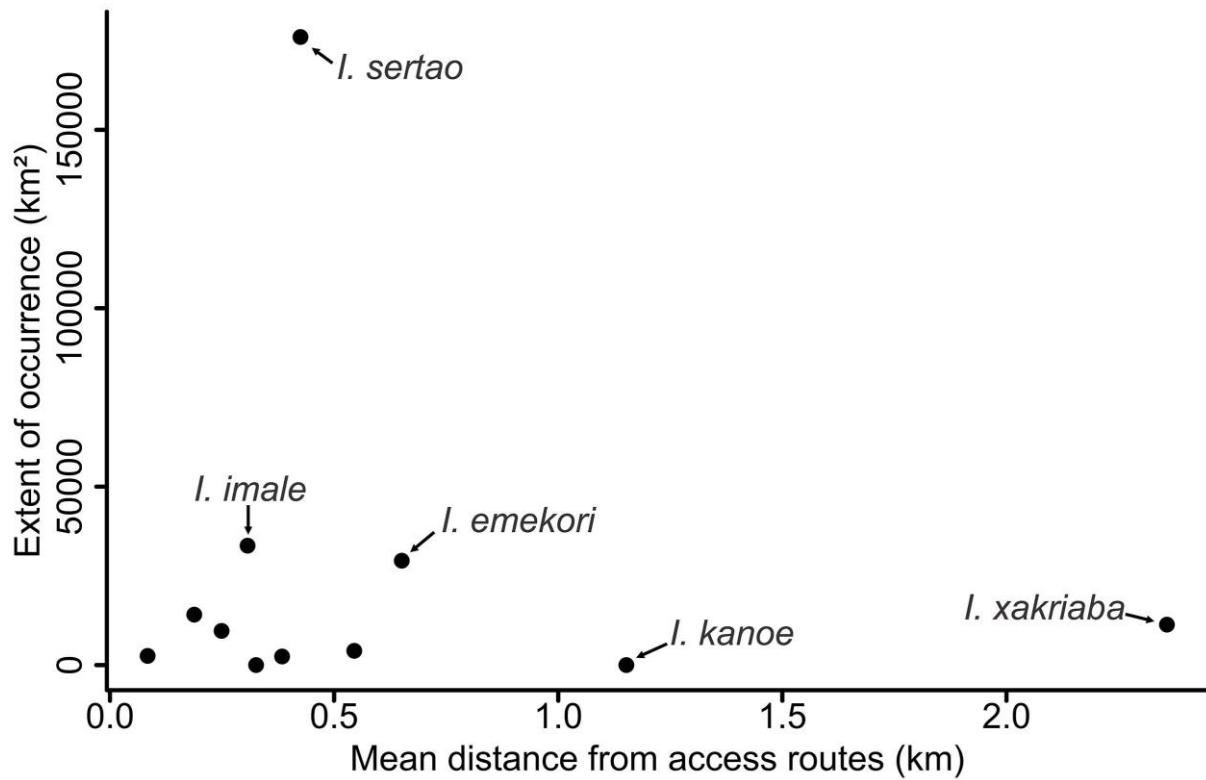
**Fig. S8.** Location of the type locality of *Ibotyporanga kanoe* sp. n. (red squares) and other sampling sites (white circles) at Floresta Nacional do Jamari, where no additional Ninetinae were collected. **A.** Overview of the conservation unit. White shaded areas represent forested areas under selective logging. **B.** Close up of the type locality. Note the cassiterite mine neighboring the type locality. Red polygon represents a rough estimate of the rocky outcrop where *I. kanoe* specimens were collected, used to estimate the extent of occurrence (EOO) for this species. Image sources: ESRI, Maxar, Earthstar Geographics and the GIS User Community.

**Fig. S9.** Vegetation and mining activities at type locality of *Ibotyporanga kanoe*



**Fig. S9.** Overview of the type locality of *Ibotyporanga kanoe* sp. nov., Pedra Grande in the Floresta Nacional do Jamari. **A, B.** Vegetation of the area. Note the mining area in the background in B. **C-F.** Dynamics of mining activities in the surroundings, in June 2017 (C, D) and September 2022 (E, F). Red square in C represents type locality. Image sources: CNES / Airbus, Maxar Technologies, Google Earth.

**Fig. S10.** Relation between extent of occurrence and mean distance from access routes



**Fig. S10.** Relation between extent of occurrence (in km<sup>2</sup>) and mean distance from access routes for *Ibotyporanga* species with at least three points of occurrences. The synanthropic and widespread species *I. naideae* was excluded from this graph. Note: the distance from access routes calculated for *I. kanoë* sp. nov. is overestimated as the dirty road seen in Fig. S9 is not in the database of access routes used.

**Table S1.** CO1 K2P distances

The MEGA 11 program and the Kimura 2 parameter model were used to calculate the genetic distances between samples. Pairwise deletion strategy was applied to deal with gaps/missing data.

Species 1	Species 2	Distance
S326_Artema_doriae_Isr40	N051_Pholcophora_americana_G090	0.225
S326_Artema_doriae_Isr40	N059_Tolteca_huahua_Mex229	0.240
N051_Pholcophora_americana_G090	N059_Tolteca_huahua_Mex229	0.182
S326_Artema_doriae_Isr40	UH345_Papiamenta_levii_Cur44	0.217
N051_Pholcophora_americana_G090	UH345_Papiamenta_levii_Cur44	0.212
N059_Tolteca_huahua_Mex229	UH345_Papiamenta_levii_Cur44	0.208
S326_Artema_doriae_Isr40	S443_Ibotyporanga_kanoe_Br16-303	0.223
N051_Pholcophora_americana_G090	S443_Ibotyporanga_kanoe_Br16-303	0.225
N059_Tolteca_huahua_Mex229	S443_Ibotyporanga_kanoe_Br16-303	0.196
UH345_Papiamenta_levii_Cur44	S443_Ibotyporanga_kanoe_Br16-303	0.173
S326_Artema_doriae_Isr40	JA123_Ibotyporanga_naideae_G117	0.239
N051_Pholcophora_americana_G090	JA123_Ibotyporanga_naideae_G117	0.222
N059_Tolteca_huahua_Mex229	JA123_Ibotyporanga_naideae_G117	0.210
UH345_Papiamenta_levii_Cur44	JA123_Ibotyporanga_naideae_G117	0.234
S443_Ibotyporanga_kanoe_Br16-303	JA123_Ibotyporanga_naideae_G117	0.186
S326_Artema_doriae_Isr40	BH58_Ibotyporanga_Ven18-182_Ven18-182	0.237
N051_Pholcophora_americana_G090	BH58_Ibotyporanga_Ven18-182_Ven18-182	0.247
N059_Tolteca_huahua_Mex229	BH58_Ibotyporanga_Ven18-182_Ven18-182	0.237
UH345_Papiamenta_levii_Cur44	BH58_Ibotyporanga_Ven18-182_Ven18-182	0.209
S443_Ibotyporanga_kanoe_Br16-303	BH58_Ibotyporanga_Ven18-182_Ven18-182	0.211
JA123_Ibotyporanga_naideae_G117	BH58_Ibotyporanga_Ven18-182_Ven18-182	0.205
S326_Artema_doriae_Isr40	N086_Ibotyporanga_Ven18-182_Ven18-182	0.235
N051_Pholcophora_americana_G090	N086_Ibotyporanga_Ven18-182_Ven18-182	0.242
N059_Tolteca_huahua_Mex229	N086_Ibotyporanga_Ven18-182_Ven18-182	0.228
UH345_Papiamenta_levii_Cur44	N086_Ibotyporanga_Ven18-182_Ven18-182	0.202
S443_Ibotyporanga_kanoe_Br16-303	N086_Ibotyporanga_Ven18-182_Ven18-182	0.202
JA123_Ibotyporanga_naideae_G117	N086_Ibotyporanga_Ven18-182_Ven18-182	0.198
BH58_Ibotyporanga_Ven18-182_Ven18-182	N086_Ibotyporanga_Ven18-182_Ven18-182	0.005
S326_Artema_doriae_Isr40	N088_Ibotyporanga_bariro_Ven20-141	0.249
N051_Pholcophora_americana_G090	N088_Ibotyporanga_bariro_Ven20-141	0.246
N059_Tolteca_huahua_Mex229	N088_Ibotyporanga_bariro_Ven20-141	0.276
UH345_Papiamenta_levii_Cur44	N088_Ibotyporanga_bariro_Ven20-141	0.202
S443_Ibotyporanga_kanoe_Br16-303	N088_Ibotyporanga_bariro_Ven20-141	0.220
JA123_Ibotyporanga_naideae_G117	N088_Ibotyporanga_bariro_Ven20-141	0.199
BH58_Ibotyporanga_Ven18-182_Ven18-182	N088_Ibotyporanga_bariro_Ven20-141	0.215
N086_Ibotyporanga_Ven18-182_Ven18-182	N088_Ibotyporanga_bariro_Ven20-141	0.205
S326_Artema_doriae_Isr40	UH054_Ibotyporanga_imale?_Br22-162	0.244
N051_Pholcophora_americana_G090	UH054_Ibotyporanga_imale?_Br22-162	0.262
N059_Tolteca_huahua_Mex229	UH054_Ibotyporanga_imale?_Br22-162	0.224
UH345_Papiamenta_levii_Cur44	UH054_Ibotyporanga_imale?_Br22-162	0.246
S443_Ibotyporanga_kanoe_Br16-303	UH054_Ibotyporanga_imale?_Br22-162	0.202

Species 1	Species 2	Distance
JA123_Ibotyporanga_naideae_G117	UH054_Ibotyporanga_imale?_Br22-162	0.264
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH054_Ibotyporanga_imale?_Br22-162	0.240
N086_Ibotyporanga_Ven18-182_Ven18-182	UH054_Ibotyporanga_imale?_Br22-162	0.245
N088_Ibotyporanga_bariro_Ven20-141	UH054_Ibotyporanga_imale?_Br22-162	0.271
S326_Artema_doriae_Isr40	UH061_Ibotyporanga_imale_Br22-180	0.280
N051_Pholcophora_americana_G090	UH061_Ibotyporanga_imale_Br22-180	0.253
N059_Tolteca_huahua_Mex229	UH061_Ibotyporanga_imale_Br22-180	0.217
UH345_Papiamenta_levii_Cur44	UH061_Ibotyporanga_imale_Br22-180	0.256
S443_Ibotyporanga_kanoe_Br16-303	UH061_Ibotyporanga_imale_Br22-180	0.200
JA123_Ibotyporanga_naideae_G117	UH061_Ibotyporanga_imale_Br22-180	0.267
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH061_Ibotyporanga_imale_Br22-180	0.255
N086_Ibotyporanga_Ven18-182_Ven18-182	UH061_Ibotyporanga_imale_Br22-180	0.254
N088_Ibotyporanga_bariro_Ven20-141	UH061_Ibotyporanga_imale_Br22-180	0.290
UH054_Ibotyporanga_imale?_Br22-162	UH061_Ibotyporanga_imale_Br22-180	0.164
S326_Artema_doriae_Isr40	UH082_Ibotyporanga_canudos_Br22-208	0.242
N051_Pholcophora_americana_G090	UH082_Ibotyporanga_canudos_Br22-208	0.233
N059_Tolteca_huahua_Mex229	UH082_Ibotyporanga_canudos_Br22-208	0.200
UH345_Papiamenta_levii_Cur44	UH082_Ibotyporanga_canudos_Br22-208	0.195
S443_Ibotyporanga_kanoe_Br16-303	UH082_Ibotyporanga_canudos_Br22-208	0.162
JA123_Ibotyporanga_naideae_G117	UH082_Ibotyporanga_canudos_Br22-208	0.238
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH082_Ibotyporanga_canudos_Br22-208	0.221
N086_Ibotyporanga_Ven18-182_Ven18-182	UH082_Ibotyporanga_canudos_Br22-208	0.217
N088_Ibotyporanga_bariro_Ven20-141	UH082_Ibotyporanga_canudos_Br22-208	0.274
UH054_Ibotyporanga_imale?_Br22-162	UH082_Ibotyporanga_canudos_Br22-208	0.224
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S326_Artema_doriae_Isr40	UH056_Ibotyporanga_imale?_Br22-168	0.238
N051_Pholcophora_americana_G090	UH056_Ibotyporanga_imale?_Br22-168	0.219
N059_Tolteca_huahua_Mex229	UH056_Ibotyporanga_imale?_Br22-168	0.219
UH345_Papiamenta_levii_Cur44	UH056_Ibotyporanga_imale?_Br22-168	0.234
S443_Ibotyporanga_kanoe_Br16-303	UH056_Ibotyporanga_imale?_Br22-168	0.180
JA123_Ibotyporanga_naideae_G117	UH056_Ibotyporanga_imale?_Br22-168	0.196
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH056_Ibotyporanga_imale?_Br22-168	0.254
N086_Ibotyporanga_Ven18-182_Ven18-182	UH056_Ibotyporanga_imale?_Br22-168	0.248
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N086_Ibotyporanga_Ven18-182_Ven18-182	UH069_Ibotyporanga_payaya_Br22-193	0.211
N088_Ibotyporanga_bariro_Ven20-141	UH069_Ibotyporanga_payaya_Br22-193	0.264

Species 1	Species 2	Distance
UH054_Ibotyporanga_imale?_Br22-162	UH069_Ibotyporanga_payaya_Br22-193	0.205
UH061_Ibotyporanga_imale_Br22-180	UH069_Ibotyporanga_payaya_Br22-193	0.230
UH082_Ibotyporanga_canudos_Br22-208	UH069_Ibotyporanga_payaya_Br22-193	0.179
UH056_Ibotyporanga_imale?_Br22-168	UH069_Ibotyporanga_payaya_Br22-193	0.206
S326_Artema_doriae_Isr40	UH051_Ibotyporanga_guanambi_Br22-158	0.228
N051_Pholcophora_americana_G090	UH051_Ibotyporanga_guanambi_Br22-158	0.228
N059_Tolteca_huahua_Mex229	UH051_Ibotyporanga_guanambi_Br22-158	0.221
UH345_Papiamenta_levii_Cur44	UH051_Ibotyporanga_guanambi_Br22-158	0.199
S443_Ibotyporanga_kanoe_Br16-303	UH051_Ibotyporanga_guanambi_Br22-158	0.190
JA123_Ibotyporanga_naideae_G117	UH051_Ibotyporanga_guanambi_Br22-158	0.228
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH051_Ibotyporanga_guanambi_Br22-158	0.235
N086_Ibotyporanga_Ven18-182_Ven18-182	UH051_Ibotyporanga_guanambi_Br22-158	0.230
N088_Ibotyporanga_bariro_Ven20-141	UH051_Ibotyporanga_guanambi_Br22-158	0.232
UH054_Ibotyporanga_imale?_Br22-162	UH051_Ibotyporanga_guanambi_Br22-158	0.218
UH061_Ibotyporanga_imale_Br22-180	UH051_Ibotyporanga_guanambi_Br22-158	0.246
UH082_Ibotyporanga_canudos_Br22-208	UH051_Ibotyporanga_guanambi_Br22-158	0.186
UH056_Ibotyporanga_imale?_Br22-168	UH051_Ibotyporanga_guanambi_Br22-158	0.212
UH069_Ibotyporanga_payaya_Br22-193	UH051_Ibotyporanga_guanambi_Br22-158	0.209
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BH58_Ibotyporanga_Ven18-182_Ven18-182	UH068_Ibotyporanga_payaya_Br22-192	0.223
N086_Ibotyporanga_Ven18-182_Ven18-182	UH068_Ibotyporanga_payaya_Br22-192	0.213
N088_Ibotyporanga_bariro_Ven20-141	UH068_Ibotyporanga_payaya_Br22-192	0.261
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BH58_Ibotyporanga_Ven18-182_Ven18-182	UH047_Ibotyporanga_naideae_Br22-153	0.198
N086_Ibotyporanga_Ven18-182_Ven18-182	UH047_Ibotyporanga_naideae_Br22-153	0.195
N088_Ibotyporanga_bariro_Ven20-141	UH047_Ibotyporanga_naideae_Br22-153	0.205
UH054_Ibotyporanga_imale?_Br22-162	UH047_Ibotyporanga_naideae_Br22-153	0.265
UH061_Ibotyporanga_imale_Br22-180	UH047_Ibotyporanga_naideae_Br22-153	0.242
UH082_Ibotyporanga_canudos_Br22-208	UH047_Ibotyporanga_naideae_Br22-153	0.221
UH056_Ibotyporanga_imale?_Br22-168	UH047_Ibotyporanga_naideae_Br22-153	0.224

Species 1	Species 2	Distance
UH069_Ibotyporanga_payaya_Br22-193	UH047_Ibotyporanga_naideae_Br22-153	0.249
UH051_Ibotyporanga_guanambi_Br22-158	UH047_Ibotyporanga_naideae_Br22-153	0.209
UH068_Ibotyporanga_payaya_Br22-192	UH047_Ibotyporanga_naideae_Br22-153	0.251
S326_Artema_doriae_Isr40	UH048_Ibotyporanga_kiriri_Br22-154	0.255
N051_Pholcophora_americana_G090	UH048_Ibotyporanga_kiriri_Br22-154	0.251
N059_Tolteca_huahua_Mex229	UH048_Ibotyporanga_kiriri_Br22-154	0.218
UH345_Papiamenta_levii_Cur44	UH048_Ibotyporanga_kiriri_Br22-154	0.237
S443_Ibotyporanga_kanoe_Br16-303	UH048_Ibotyporanga_kiriri_Br22-154	0.181
JA123_Ibotyporanga_naideae_G117	UH048_Ibotyporanga_kiriri_Br22-154	0.247
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH048_Ibotyporanga_kiriri_Br22-154	0.253
N086_Ibotyporanga_Ven18-182_Ven18-182	UH048_Ibotyporanga_kiriri_Br22-154	0.250
N088_Ibotyporanga_bariro_Ven20-141	UH048_Ibotyporanga_kiriri_Br22-154	0.242
UH054_Ibotyporanga_imale?_Br22-162	UH048_Ibotyporanga_kiriri_Br22-154	0.214
UH061_Ibotyporanga_imale_Br22-180	UH048_Ibotyporanga_kiriri_Br22-154	0.223
UH082_Ibotyporanga_canudos_Br22-208	UH048_Ibotyporanga_kiriri_Br22-154	0.148
UH056_Ibotyporanga_imale?_Br22-168	UH048_Ibotyporanga_kiriri_Br22-154	0.205
UH069_Ibotyporanga_payaya_Br22-193	UH048_Ibotyporanga_kiriri_Br22-154	0.190
UH051_Ibotyporanga_guanambi_Br22-158	UH048_Ibotyporanga_kiriri_Br22-154	0.200
UH068_Ibotyporanga_payaya_Br22-192	UH048_Ibotyporanga_kiriri_Br22-154	0.193
UH047_Ibotyporanga_naideae_Br22-153	UH048_Ibotyporanga_kiriri_Br22-154	0.241
S326_Artema_doriae_Isr40	UH095_Ibotyporanga_canudos_Br22-230	0.249
N051_Pholcophora_americana_G090	UH095_Ibotyporanga_canudos_Br22-230	0.233
N059_Tolteca_huahua_Mex229	UH095_Ibotyporanga_canudos_Br22-230	0.203
UH345_Papiamenta_levii_Cur44	UH095_Ibotyporanga_canudos_Br22-230	0.195
S443_Ibotyporanga_kanoe_Br16-303	UH095_Ibotyporanga_canudos_Br22-230	0.174
JA123_Ibotyporanga_naideae_G117	UH095_Ibotyporanga_canudos_Br22-230	0.244
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH095_Ibotyporanga_canudos_Br22-230	0.230
N086_Ibotyporanga_Ven18-182_Ven18-182	UH095_Ibotyporanga_canudos_Br22-230	0.226
N088_Ibotyporanga_bariro_Ven20-141	UH095_Ibotyporanga_canudos_Br22-230	0.258
UH054_Ibotyporanga_imale?_Br22-162	UH095_Ibotyporanga_canudos_Br22-230	0.219
UH061_Ibotyporanga_imale_Br22-180	UH095_Ibotyporanga_canudos_Br22-230	0.229
UH082_Ibotyporanga_canudos_Br22-208	UH095_Ibotyporanga_canudos_Br22-230	0.038
UH056_Ibotyporanga_imale?_Br22-168	UH095_Ibotyporanga_canudos_Br22-230	0.205
UH069_Ibotyporanga_payaya_Br22-193	UH095_Ibotyporanga_canudos_Br22-230	0.170
UH051_Ibotyporanga_guanambi_Br22-158	UH095_Ibotyporanga_canudos_Br22-230	0.194
UH068_Ibotyporanga_payaya_Br22-192	UH095_Ibotyporanga_canudos_Br22-230	0.172
UH047_Ibotyporanga_naideae_Br22-153	UH095_Ibotyporanga_canudos_Br22-230	0.230
UH048_Ibotyporanga_kiriri_Br22-154	UH095_Ibotyporanga_canudos_Br22-230	0.153
S326_Artema_doriae_Isr40	UH064_Ibotyporanga_emekori_Br22-183	0.258
N051_Pholcophora_americana_G090	UH064_Ibotyporanga_emekori_Br22-183	0.216
N059_Tolteca_huahua_Mex229	UH064_Ibotyporanga_emekori_Br22-183	0.221
UH345_Papiamenta_levii_Cur44	UH064_Ibotyporanga_emekori_Br22-183	0.214
S443_Ibotyporanga_kanoe_Br16-303	UH064_Ibotyporanga_emekori_Br22-183	0.166
JA123_Ibotyporanga_naideae_G117	UH064_Ibotyporanga_emekori_Br22-183	0.221
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH064_Ibotyporanga_emekori_Br22-183	0.223
N086_Ibotyporanga_Ven18-182_Ven18-182	UH064_Ibotyporanga_emekori_Br22-183	0.213

Species 1	Species 2	Distance
N088_Ibotyporanga_bariro_Ven20-141	UH064_Ibotyporanga_emekori_Br22-183	0.265
UH054_Ibotyporanga_imale?_Br22-162	UH064_Ibotyporanga_emekori_Br22-183	0.207
UH061_Ibotyporanga_imale_Br22-180	UH064_Ibotyporanga_emekori_Br22-183	0.222
UH082_Ibotyporanga_canudos_Br22-208	UH064_Ibotyporanga_emekori_Br22-183	0.163
UH056_Ibotyporanga_imale?_Br22-168	UH064_Ibotyporanga_emekori_Br22-183	0.189
UH069_Ibotyporanga_payaya_Br22-193	UH064_Ibotyporanga_emekori_Br22-183	0.164
UH051_Ibotyporanga_guanambi_Br22-158	UH064_Ibotyporanga_emekori_Br22-183	0.206
UH068_Ibotyporanga_payaya_Br22-192	UH064_Ibotyporanga_emekori_Br22-183	0.166
UH047_Ibotyporanga_naideae_Br22-153	UH064_Ibotyporanga_emekori_Br22-183	0.213
UH048_Ibotyporanga_kiriri_Br22-154	UH064_Ibotyporanga_emekori_Br22-183	0.171
UH095_Ibotyporanga_canudos_Br22-230	UH064_Ibotyporanga_emekori_Br22-183	0.155
S326_Artema_doriae_Isr40	UH091_Ibotyporanga_diroa_Br22-225	0.229
N051_Pholcophora_americana_G090	UH091_Ibotyporanga_diroa_Br22-225	0.215
N059_Tolteca_huahua_Mex229	UH091_Ibotyporanga_diroa_Br22-225	0.208
UH345_Papiamenta_levii_Cur44	UH091_Ibotyporanga_diroa_Br22-225	0.206
S443_Ibotyporanga_kanoe_Br16-303	UH091_Ibotyporanga_diroa_Br22-225	0.192
JA123_Ibotyporanga_naideae_G117	UH091_Ibotyporanga_diroa_Br22-225	0.188
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH091_Ibotyporanga_diroa_Br22-225	0.206
N086_Ibotyporanga_Ven18-182_Ven18-182	UH091_Ibotyporanga_diroa_Br22-225	0.204
N088_Ibotyporanga_bariro_Ven20-141	UH091_Ibotyporanga_diroa_Br22-225	0.240
UH054_Ibotyporanga_imale?_Br22-162	UH091_Ibotyporanga_diroa_Br22-225	0.245
UH061_Ibotyporanga_imale_Br22-180	UH091_Ibotyporanga_diroa_Br22-225	0.235
UH082_Ibotyporanga_canudos_Br22-208	UH091_Ibotyporanga_diroa_Br22-225	0.210
UH056_Ibotyporanga_imale?_Br22-168	UH091_Ibotyporanga_diroa_Br22-225	0.204
UH069_Ibotyporanga_payaya_Br22-193	UH091_Ibotyporanga_diroa_Br22-225	0.208
UH051_Ibotyporanga_guanambi_Br22-158	UH091_Ibotyporanga_diroa_Br22-225	0.197
UH068_Ibotyporanga_payaya_Br22-192	UH091_Ibotyporanga_diroa_Br22-225	0.210
UH047_Ibotyporanga_naideae_Br22-153	UH091_Ibotyporanga_diroa_Br22-225	0.181
UH048_Ibotyporanga_kiriri_Br22-154	UH091_Ibotyporanga_diroa_Br22-225	0.211
UH095_Ibotyporanga_canudos_Br22-230	UH091_Ibotyporanga_diroa_Br22-225	0.210
UH064_Ibotyporanga_emekori_Br22-183	UH091_Ibotyporanga_diroa_Br22-225	0.196
S326_Artema_doriae_Isr40	UH093_Ibotyporanga_diroa_Br22-227	0.233
N051_Pholcophora_americana_G090	UH093_Ibotyporanga_diroa_Br22-227	0.219
N059_Tolteca_huahua_Mex229	UH093_Ibotyporanga_diroa_Br22-227	0.186
UH345_Papiamenta_levii_Cur44	UH093_Ibotyporanga_diroa_Br22-227	0.201
S443_Ibotyporanga_kanoe_Br16-303	UH093_Ibotyporanga_diroa_Br22-227	0.187
JA123_Ibotyporanga_naideae_G117	UH093_Ibotyporanga_diroa_Br22-227	0.198
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH093_Ibotyporanga_diroa_Br22-227	0.209
N086_Ibotyporanga_Ven18-182_Ven18-182	UH093_Ibotyporanga_diroa_Br22-227	0.205
N088_Ibotyporanga_bariro_Ven20-141	UH093_Ibotyporanga_diroa_Br22-227	0.231
UH054_Ibotyporanga_imale?_Br22-162	UH093_Ibotyporanga_diroa_Br22-227	0.233
UH061_Ibotyporanga_imale_Br22-180	UH093_Ibotyporanga_diroa_Br22-227	0.236
UH082_Ibotyporanga_canudos_Br22-208	UH093_Ibotyporanga_diroa_Br22-227	0.201
UH056_Ibotyporanga_imale?_Br22-168	UH093_Ibotyporanga_diroa_Br22-227	0.210
UH069_Ibotyporanga_payaya_Br22-193	UH093_Ibotyporanga_diroa_Br22-227	0.212
UH051_Ibotyporanga_guanambi_Br22-158	UH093_Ibotyporanga_diroa_Br22-227	0.200



Species 1	Species 2	Distance
UH068_Ibotyporanga_payaya_Br22-192	UH093_Ibotyporanga_diroa_Br22-227	0.214
UH047_Ibotyporanga_naideae_Br22-153	UH093_Ibotyporanga_diroa_Br22-227	0.193
UH048_Ibotyporanga_kiriri_Br22-154	UH093_Ibotyporanga_diroa_Br22-227	0.207
UH095_Ibotyporanga_canudos_Br22-230	UH093_Ibotyporanga_diroa_Br22-227	0.214
UH064_Ibotyporanga_emekori_Br22-183	UH093_Ibotyporanga_diroa_Br22-227	0.201
UH091_Ibotyporanga_diroa_Br22-225	UH093_Ibotyporanga_diroa_Br22-227	0.035
S326_Artema_doriae_Isr40	UH074_Ibotyporanga_guanambi?_Br22-198	0.234
N051_Pholcophora_americana_G090	UH074_Ibotyporanga_guanambi?_Br22-198	0.221
N059_Tolteca_huahua_Mex229	UH074_Ibotyporanga_guanambi?_Br22-198	0.207
UH345_Papiamenta_levii_Cur44	UH074_Ibotyporanga_guanambi?_Br22-198	0.199
S443_Ibotyporanga_kanoe_Br16-303	UH074_Ibotyporanga_guanambi?_Br22-198	0.189
JA123_Ibotyporanga_naideae_G117	UH074_Ibotyporanga_guanambi?_Br22-198	0.225
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH074_Ibotyporanga_guanambi?_Br22-198	0.214
N086_Ibotyporanga_Ven18-182_Ven18-182	UH074_Ibotyporanga_guanambi?_Br22-198	0.214
N088_Ibotyporanga_bariro_Ven20-141	UH074_Ibotyporanga_guanambi?_Br22-198	0.231
UH054_Ibotyporanga_imale?_Br22-162	UH074_Ibotyporanga_guanambi?_Br22-198	0.217
UH061_Ibotyporanga_imale_Br22-180	UH074_Ibotyporanga_guanambi?_Br22-198	0.240
UH082_Ibotyporanga_canudos_Br22-208	UH074_Ibotyporanga_guanambi?_Br22-198	0.191
UH056_Ibotyporanga_imale?_Br22-168	UH074_Ibotyporanga_guanambi?_Br22-198	0.224
UH069_Ibotyporanga_payaya_Br22-193	UH074_Ibotyporanga_guanambi?_Br22-198	0.199
UH051_Ibotyporanga_guanambi_Br22-158	UH074_Ibotyporanga_guanambi?_Br22-198	0.087
UH068_Ibotyporanga_payaya_Br22-192	UH074_Ibotyporanga_guanambi?_Br22-198	0.197
UH047_Ibotyporanga_naideae_Br22-153	UH074_Ibotyporanga_guanambi?_Br22-198	0.206
UH048_Ibotyporanga_kiriri_Br22-154	UH074_Ibotyporanga_guanambi?_Br22-198	0.220
UH095_Ibotyporanga_canudos_Br22-230	UH074_Ibotyporanga_guanambi?_Br22-198	0.197
UH064_Ibotyporanga_emekori_Br22-183	UH074_Ibotyporanga_guanambi?_Br22-198	0.215
UH091_Ibotyporanga_diroa_Br22-225	UH074_Ibotyporanga_guanambi?_Br22-198	0.171
UH093_Ibotyporanga_diroa_Br22-227	UH074_Ibotyporanga_guanambi?_Br22-198	0.173
S326_Artema_doriae_Isr40	UH078_Ibotyporanga_canudos_Br22-203	0.254
N051_Pholcophora_americana_G090	UH078_Ibotyporanga_canudos_Br22-203	0.233
N059_Tolteca_huahua_Mex229	UH078_Ibotyporanga_canudos_Br22-203	0.205
UH345_Papiamenta_levii_Cur44	UH078_Ibotyporanga_canudos_Br22-203	0.193
S443_Ibotyporanga_kanoe_Br16-303	UH078_Ibotyporanga_canudos_Br22-203	0.170
JA123_Ibotyporanga_naideae_G117	UH078_Ibotyporanga_canudos_Br22-203	0.252
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH078_Ibotyporanga_canudos_Br22-203	0.230
N086_Ibotyporanga_Ven18-182_Ven18-182	UH078_Ibotyporanga_canudos_Br22-203	0.230
N088_Ibotyporanga_bariro_Ven20-141	UH078_Ibotyporanga_canudos_Br22-203	0.267
UH054_Ibotyporanga_imale?_Br22-162	UH078_Ibotyporanga_canudos_Br22-203	0.219
UH061_Ibotyporanga_imale_Br22-180	UH078_Ibotyporanga_canudos_Br22-203	0.229
UH082_Ibotyporanga_canudos_Br22-208	UH078_Ibotyporanga_canudos_Br22-203	0.012
UH056_Ibotyporanga_imale?_Br22-168	UH078_Ibotyporanga_canudos_Br22-203	0.218
UH069_Ibotyporanga_payaya_Br22-193	UH078_Ibotyporanga_canudos_Br22-203	0.179
UH051_Ibotyporanga_guanambi_Br22-158	UH078_Ibotyporanga_canudos_Br22-203	0.201
UH068_Ibotyporanga_payaya_Br22-192	UH078_Ibotyporanga_canudos_Br22-203	0.181
UH047_Ibotyporanga_naideae_Br22-153	UH078_Ibotyporanga_canudos_Br22-203	0.230
UH048_Ibotyporanga_kiriri_Br22-154	UH078_Ibotyporanga_canudos_Br22-203	0.153

Species 1	Species 2	Distance
UH095_Ibotyporanga_canudos_Br22-230	UH078_Ibotyporanga_canudos_Br22-203	0.038
UH064_Ibotyporanga_emekori_Br22-183	UH078_Ibotyporanga_canudos_Br22-203	0.169
UH091_Ibotyporanga_diroa_Br22-225	UH078_Ibotyporanga_canudos_Br22-203	0.208
UH093_Ibotyporanga_diroa_Br22-227	UH078_Ibotyporanga_canudos_Br22-203	0.207
UH074_Ibotyporanga_guanambi?_Br22-198	UH078_Ibotyporanga_canudos_Br22-203	0.202
S326_Artema_doriae_Isr40	UH079_Ibotyporanga_tuxa_Br22-204	0.253
N051_Pholcophora_americana_G090	UH079_Ibotyporanga_tuxa_Br22-204	0.222
N059_Tolteca_huahua_Mex229	UH079_Ibotyporanga_tuxa_Br22-204	0.221
UH345_Papiamenta_levii_Cur44	UH079_Ibotyporanga_tuxa_Br22-204	0.226
S443_Ibotyporanga_kanoe_Br16-303	UH079_Ibotyporanga_tuxa_Br22-204	0.168
JA123_Ibotyporanga_naideae_G117	UH079_Ibotyporanga_tuxa_Br22-204	0.212
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH079_Ibotyporanga_tuxa_Br22-204	0.231
N086_Ibotyporanga_Ven18-182_Ven18-182	UH079_Ibotyporanga_tuxa_Br22-204	0.214
N088_Ibotyporanga_bariro_Ven20-141	UH079_Ibotyporanga_tuxa_Br22-204	0.259
UH054_Ibotyporanga_imale?_Br22-162	UH079_Ibotyporanga_tuxa_Br22-204	0.223
UH061_Ibotyporanga_imale_Br22-180	UH079_Ibotyporanga_tuxa_Br22-204	0.225
UH082_Ibotyporanga_canudos_Br22-208	UH079_Ibotyporanga_tuxa_Br22-204	0.183
UH056_Ibotyporanga_imale?_Br22-168	UH079_Ibotyporanga_tuxa_Br22-204	0.197
UH069_Ibotyporanga_payaya_Br22-193	UH079_Ibotyporanga_tuxa_Br22-204	0.160
UH051_Ibotyporanga_guanambi_Br22-158	UH079_Ibotyporanga_tuxa_Br22-204	0.214
UH068_Ibotyporanga_payaya_Br22-192	UH079_Ibotyporanga_tuxa_Br22-204	0.162
UH047_Ibotyporanga_naideae_Br22-153	UH079_Ibotyporanga_tuxa_Br22-204	0.203
UH048_Ibotyporanga_kiriri_Br22-154	UH079_Ibotyporanga_tuxa_Br22-204	0.151
UH095_Ibotyporanga_canudos_Br22-230	UH079_Ibotyporanga_tuxa_Br22-204	0.177
UH064_Ibotyporanga_emekori_Br22-183	UH079_Ibotyporanga_tuxa_Br22-204	0.153
UH091_Ibotyporanga_diroa_Br22-225	UH079_Ibotyporanga_tuxa_Br22-204	0.188
UH093_Ibotyporanga_diroa_Br22-227	UH079_Ibotyporanga_tuxa_Br22-204	0.191
UH074_Ibotyporanga_guanambi?_Br22-198	UH079_Ibotyporanga_tuxa_Br22-204	0.213
UH078_Ibotyporanga_canudos_Br22-203	UH079_Ibotyporanga_tuxa_Br22-204	0.189
S326_Artema_doriae_Isr40	UH083_Ibotyporanga_itajubaquara_Br22-212	0.262
N051_Pholcophora_americana_G090	UH083_Ibotyporanga_itajubaquara_Br22-212	0.208
N059_Tolteca_huahua_Mex229	UH083_Ibotyporanga_itajubaquara_Br22-212	0.213
UH345_Papiamenta_levii_Cur44	UH083_Ibotyporanga_itajubaquara_Br22-212	0.227
S443_Ibotyporanga_kanoe_Br16-303	UH083_Ibotyporanga_itajubaquara_Br22-212	0.190
JA123_Ibotyporanga_naideae_G117	UH083_Ibotyporanga_itajubaquara_Br22-212	0.233
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH083_Ibotyporanga_itajubaquara_Br22-212	0.222
N086_Ibotyporanga_Ven18-182_Ven18-182	UH083_Ibotyporanga_itajubaquara_Br22-212	0.209
N088_Ibotyporanga_bariro_Ven20-141	UH083_Ibotyporanga_itajubaquara_Br22-212	0.265
UH054_Ibotyporanga_imale?_Br22-162	UH083_Ibotyporanga_itajubaquara_Br22-212	0.222
UH061_Ibotyporanga_imale_Br22-180	UH083_Ibotyporanga_itajubaquara_Br22-212	0.242
UH082_Ibotyporanga_canudos_Br22-208	UH083_Ibotyporanga_itajubaquara_Br22-212	0.170
UH056_Ibotyporanga_imale?_Br22-168	UH083_Ibotyporanga_itajubaquara_Br22-212	0.229
UH069_Ibotyporanga_payaya_Br22-193	UH083_Ibotyporanga_itajubaquara_Br22-212	0.191
UH051_Ibotyporanga_guanambi_Br22-158	UH083_Ibotyporanga_itajubaquara_Br22-212	0.205
UH068_Ibotyporanga_payaya_Br22-192	UH083_Ibotyporanga_itajubaquara_Br22-212	0.193
UH047_Ibotyporanga_naideae_Br22-153	UH083_Ibotyporanga_itajubaquara_Br22-212	0.236

Species 1	Species 2	Distance
UH048_Ibotyporanga_kiriri_Br22-154	UH083_Ibotyporanga_itajubaquara_Br22-212	0.155
UH095_Ibotyporanga_canudos_Br22-230	UH083_Ibotyporanga_itajubaquara_Br22-212	0.144
UH064_Ibotyporanga_emekori_Br22-183	UH083_Ibotyporanga_itajubaquara_Br22-212	0.152
UH091_Ibotyporanga_diroa_Br22-225	UH083_Ibotyporanga_itajubaquara_Br22-212	0.210
UH093_Ibotyporanga_diroa_Br22-227	UH083_Ibotyporanga_itajubaquara_Br22-212	0.212
UH074_Ibotyporanga_guanambi?_Br22-198	UH083_Ibotyporanga_itajubaquara_Br22-212	0.224
UH078_Ibotyporanga_canudos_Br22-203	UH083_Ibotyporanga_itajubaquara_Br22-212	0.166
UH079_Ibotyporanga_tuxa_Br22-204	UH083_Ibotyporanga_itajubaquara_Br22-212	0.151
S326_Artema_doriae_Isr40	UH086_Ibotyporanga_itajubaquara_Br22-216	0.237
N051_Pholcophora_americana_G090	UH086_Ibotyporanga_itajubaquara_Br22-216	0.225
N059_Tolteca_huahua_Mex229	UH086_Ibotyporanga_itajubaquara_Br22-216	0.233
UH345_Papiamenta_levii_Cur44	UH086_Ibotyporanga_itajubaquara_Br22-216	0.214
S443_Ibotyporanga_kanoe_Br16-303	UH086_Ibotyporanga_itajubaquara_Br22-216	0.199
JA123_Ibotyporanga_naideae_G117	UH086_Ibotyporanga_itajubaquara_Br22-216	0.254
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH086_Ibotyporanga_itajubaquara_Br22-216	0.233
N086_Ibotyporanga_Ven18-182_Ven18-182	UH086_Ibotyporanga_itajubaquara_Br22-216	0.226
N088_Ibotyporanga_bariro_Ven20-141	UH086_Ibotyporanga_itajubaquara_Br22-216	0.272
UH054_Ibotyporanga_imale?_Br22-162	UH086_Ibotyporanga_itajubaquara_Br22-216	0.213
UH061_Ibotyporanga_imale_Br22-180	UH086_Ibotyporanga_itajubaquara_Br22-216	0.248
UH082_Ibotyporanga_canudos_Br22-208	UH086_Ibotyporanga_itajubaquara_Br22-216	0.164
UH056_Ibotyporanga_imale?_Br22-168	UH086_Ibotyporanga_itajubaquara_Br22-216	0.221
UH069_Ibotyporanga_payaya_Br22-193	UH086_Ibotyporanga_itajubaquara_Br22-216	0.177
UH051_Ibotyporanga_guanambi_Br22-158	UH086_Ibotyporanga_itajubaquara_Br22-216	0.210
UH068_Ibotyporanga_payaya_Br22-192	UH086_Ibotyporanga_itajubaquara_Br22-216	0.179
UH047_Ibotyporanga_naideae_Br22-153	UH086_Ibotyporanga_itajubaquara_Br22-216	0.241
UH048_Ibotyporanga_kiriri_Br22-154	UH086_Ibotyporanga_itajubaquara_Br22-216	0.173
UH095_Ibotyporanga_canudos_Br22-230	UH086_Ibotyporanga_itajubaquara_Br22-216	0.150
UH064_Ibotyporanga_emekori_Br22-183	UH086_Ibotyporanga_itajubaquara_Br22-216	0.170
UH091_Ibotyporanga_diroa_Br22-225	UH086_Ibotyporanga_itajubaquara_Br22-216	0.204
UH093_Ibotyporanga_diroa_Br22-227	UH086_Ibotyporanga_itajubaquara_Br22-216	0.210
UH074_Ibotyporanga_guanambi?_Br22-198	UH086_Ibotyporanga_itajubaquara_Br22-216	0.229
UH078_Ibotyporanga_canudos_Br22-203	UH086_Ibotyporanga_itajubaquara_Br22-216	0.168
UH079_Ibotyporanga_tuxa_Br22-204	UH086_Ibotyporanga_itajubaquara_Br22-216	0.169
UH083_Ibotyporanga_itajubaquara_Br22-212	UH086_Ibotyporanga_itajubaquara_Br22-216	0.103
S326_Artema_doriae_Isr40	UH177_Ibotyporanga_sertao_Carv60	0.253
N051_Pholcophora_americana_G090	UH177_Ibotyporanga_sertao_Carv60	0.223
N059_Tolteca_huahua_Mex229	UH177_Ibotyporanga_sertao_Carv60	0.225
UH345_Papiamenta_levii_Cur44	UH177_Ibotyporanga_sertao_Carv60	0.217
S443_Ibotyporanga_kanoe_Br16-303	UH177_Ibotyporanga_sertao_Carv60	0.199
JA123_Ibotyporanga_naideae_G117	UH177_Ibotyporanga_sertao_Carv60	0.270
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH177_Ibotyporanga_sertao_Carv60	0.250
N086_Ibotyporanga_Ven18-182_Ven18-182	UH177_Ibotyporanga_sertao_Carv60	0.240
N088_Ibotyporanga_bariro_Ven20-141	UH177_Ibotyporanga_sertao_Carv60	0.244
UH054_Ibotyporanga_imale?_Br22-162	UH177_Ibotyporanga_sertao_Carv60	0.225
UH061_Ibotyporanga_imale_Br22-180	UH177_Ibotyporanga_sertao_Carv60	0.233
UH082_Ibotyporanga_canudos_Br22-208	UH177_Ibotyporanga_sertao_Carv60	0.197

Species 1	Species 2	Distance
UH056_Ibotyporanga_imale?_Br22-168	UH177_Ibotyporanga_sertao_Carv60	0.232
UH069_Ibotyporanga_payaya_Br22-193	UH177_Ibotyporanga_sertao_Carv60	0.226
UH051_Ibotyporanga_guanambi_Br22-158	UH177_Ibotyporanga_sertao_Carv60	0.194
UH068_Ibotyporanga_payaya_Br22-192	UH177_Ibotyporanga_sertao_Carv60	0.229
UH047_Ibotyporanga_naideae_Br22-153	UH177_Ibotyporanga_sertao_Carv60	0.220
UH048_Ibotyporanga_kiriri_Br22-154	UH177_Ibotyporanga_sertao_Carv60	0.208
UH095_Ibotyporanga_canudos_Br22-230	UH177_Ibotyporanga_sertao_Carv60	0.189
UH064_Ibotyporanga_emekori_Br22-183	UH177_Ibotyporanga_sertao_Carv60	0.182
UH091_Ibotyporanga_diroa_Br22-225	UH177_Ibotyporanga_sertao_Carv60	0.188
UH093_Ibotyporanga_diroa_Br22-227	UH177_Ibotyporanga_sertao_Carv60	0.202
UH074_Ibotyporanga_guanambi?_Br22-198	UH177_Ibotyporanga_sertao_Carv60	0.217
UH078_Ibotyporanga_canudos_Br22-203	UH177_Ibotyporanga_sertao_Carv60	0.195
UH079_Ibotyporanga_tuxa_Br22-204	UH177_Ibotyporanga_sertao_Carv60	0.181
UH083_Ibotyporanga_itajubaquara_Br22-212	UH177_Ibotyporanga_sertao_Carv60	0.182
UH086_Ibotyporanga_itajubaquara_Br22-216	UH177_Ibotyporanga_sertao_Carv60	0.185
S326_Artema_doriae_Isr40	UH179_Ibotyporanga_sertao_Carv74	0.263
N051_Pholcophora_americana_G090	UH179_Ibotyporanga_sertao_Carv74	0.230
N059_Tolteca_huahua_Mex229	UH179_Ibotyporanga_sertao_Carv74	0.223
UH345_Papiamenta_levii_Cur44	UH179_Ibotyporanga_sertao_Carv74	0.216
S443_Ibotyporanga_kanoe_Br16-303	UH179_Ibotyporanga_sertao_Carv74	0.199
JA123_Ibotyporanga_naideae_G117	UH179_Ibotyporanga_sertao_Carv74	0.259
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH179_Ibotyporanga_sertao_Carv74	0.261
N086_Ibotyporanga_Ven18-182_Ven18-182	UH179_Ibotyporanga_sertao_Carv74	0.247
N088_Ibotyporanga_bariro_Ven20-141	UH179_Ibotyporanga_sertao_Carv74	0.245
UH054_Ibotyporanga_imale?_Br22-162	UH179_Ibotyporanga_sertao_Carv74	0.220
UH061_Ibotyporanga_imale_Br22-180	UH179_Ibotyporanga_sertao_Carv74	0.231
UH082_Ibotyporanga_canudos_Br22-208	UH179_Ibotyporanga_sertao_Carv74	0.201
UH056_Ibotyporanga_imale?_Br22-168	UH179_Ibotyporanga_sertao_Carv74	0.228
UH069_Ibotyporanga_payaya_Br22-193	UH179_Ibotyporanga_sertao_Carv74	0.220
UH051_Ibotyporanga_guanambi_Br22-158	UH179_Ibotyporanga_sertao_Carv74	0.197
UH068_Ibotyporanga_payaya_Br22-192	UH179_Ibotyporanga_sertao_Carv74	0.222
UH047_Ibotyporanga_naideae_Br22-153	UH179_Ibotyporanga_sertao_Carv74	0.214
UH048_Ibotyporanga_kiriri_Br22-154	UH179_Ibotyporanga_sertao_Carv74	0.213
UH095_Ibotyporanga_canudos_Br22-230	UH179_Ibotyporanga_sertao_Carv74	0.195
UH064_Ibotyporanga_emekori_Br22-183	UH179_Ibotyporanga_sertao_Carv74	0.178
UH091_Ibotyporanga_diroa_Br22-225	UH179_Ibotyporanga_sertao_Carv74	0.195
UH093_Ibotyporanga_diroa_Br22-227	UH179_Ibotyporanga_sertao_Carv74	0.208
UH074_Ibotyporanga_guanambi?_Br22-198	UH179_Ibotyporanga_sertao_Carv74	0.207
UH078_Ibotyporanga_canudos_Br22-203	UH179_Ibotyporanga_sertao_Carv74	0.199
UH079_Ibotyporanga_tuxa_Br22-204	UH179_Ibotyporanga_sertao_Carv74	0.187
UH083_Ibotyporanga_itajubaquara_Br22-212	UH179_Ibotyporanga_sertao_Carv74	0.184
UH086_Ibotyporanga_itajubaquara_Br22-216	UH179_Ibotyporanga_sertao_Carv74	0.189
UH177_Ibotyporanga_sertao_Carv60	UH179_Ibotyporanga_sertao_Carv74	0.025
S326_Artema_doriae_Isr40	UH097_Ibotyporanga_naideae_Br22-236	0.235
N051_Pholcophora_americana_G090	UH097_Ibotyporanga_naideae_Br22-236	0.230
N059_Tolteca_huahua_Mex229	UH097_Ibotyporanga_naideae_Br22-236	0.228

Species 1	Species 2	Distance
UH345_Papiamenta_levii_Cur44	UH097_Ibotyporanga_naideae_Br22-236	0.220
S443_Ibotyporanga_kanoe_Br16-303	UH097_Ibotyporanga_naideae_Br22-236	0.176
JA123_Ibotyporanga_naideae_G117	UH097_Ibotyporanga_naideae_Br22-236	0.005
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH097_Ibotyporanga_naideae_Br22-236	0.205
N086_Ibotyporanga_Ven18-182_Ven18-182	UH097_Ibotyporanga_naideae_Br22-236	0.202
N088_Ibotyporanga_bariro_Ven20-141	UH097_Ibotyporanga_naideae_Br22-236	0.212
UH054_Ibotyporanga_imale?_Br22-162	UH097_Ibotyporanga_naideae_Br22-236	0.262
UH061_Ibotyporanga_imale_Br22-180	UH097_Ibotyporanga_naideae_Br22-236	0.250
UH082_Ibotyporanga_canudos_Br22-208	UH097_Ibotyporanga_naideae_Br22-236	0.222
UH056_Ibotyporanga_imale?_Br22-168	UH097_Ibotyporanga_naideae_Br22-236	0.227
UH069_Ibotyporanga_payaya_Br22-193	UH097_Ibotyporanga_naideae_Br22-236	0.257
UH051_Ibotyporanga_guanambi_Br22-158	UH097_Ibotyporanga_naideae_Br22-236	0.212
UH068_Ibotyporanga_payaya_Br22-192	UH097_Ibotyporanga_naideae_Br22-236	0.259
UH047_Ibotyporanga_naideae_Br22-153	UH097_Ibotyporanga_naideae_Br22-236	0.005
UH048_Ibotyporanga_kiriri_Br22-154	UH097_Ibotyporanga_naideae_Br22-236	0.244
UH095_Ibotyporanga_canudos_Br22-230	UH097_Ibotyporanga_naideae_Br22-236	0.228
UH064_Ibotyporanga_emekori_Br22-183	UH097_Ibotyporanga_naideae_Br22-236	0.216
UH091_Ibotyporanga_diroa_Br22-225	UH097_Ibotyporanga_naideae_Br22-236	0.186
UH093_Ibotyporanga_diroa_Br22-227	UH097_Ibotyporanga_naideae_Br22-236	0.200
UH074_Ibotyporanga_guanambi?_Br22-198	UH097_Ibotyporanga_naideae_Br22-236	0.211
UH078_Ibotyporanga_canudos_Br22-203	UH097_Ibotyporanga_naideae_Br22-236	0.231
UH079_Ibotyporanga_tuxa_Br22-204	UH097_Ibotyporanga_naideae_Br22-236	0.210
UH083_Ibotyporanga_itajubaquara_Br22-212	UH097_Ibotyporanga_naideae_Br22-236	0.243
UH086_Ibotyporanga_itajubaquara_Br22-216	UH097_Ibotyporanga_naideae_Br22-236	0.244
UH177_Ibotyporanga_sertao_Carv60	UH097_Ibotyporanga_naideae_Br22-236	0.228
UH179_Ibotyporanga_sertao_Carv74	UH097_Ibotyporanga_naideae_Br22-236	0.222
S326_Artema_doriae_Isr40	UH098_Ibotyporanga_canudos_Br22-239	0.249
N051_Pholcophora_americana_G090	UH098_Ibotyporanga_canudos_Br22-239	0.234
N059_Tolteca_huahua_Mex229	UH098_Ibotyporanga_canudos_Br22-239	0.204
UH345_Papiamenta_levii_Cur44	UH098_Ibotyporanga_canudos_Br22-239	0.215
S443_Ibotyporanga_kanoe_Br16-303	UH098_Ibotyporanga_canudos_Br22-239	0.180
JA123_Ibotyporanga_naideae_G117	UH098_Ibotyporanga_canudos_Br22-239	0.248
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH098_Ibotyporanga_canudos_Br22-239	0.242
N086_Ibotyporanga_Ven18-182_Ven18-182	UH098_Ibotyporanga_canudos_Br22-239	0.239
N088_Ibotyporanga_bariro_Ven20-141	UH098_Ibotyporanga_canudos_Br22-239	0.264
UH054_Ibotyporanga_imale?_Br22-162	UH098_Ibotyporanga_canudos_Br22-239	0.237
UH061_Ibotyporanga_imale_Br22-180	UH098_Ibotyporanga_canudos_Br22-239	0.227
UH082_Ibotyporanga_canudos_Br22-208	UH098_Ibotyporanga_canudos_Br22-239	0.106
UH056_Ibotyporanga_imale?_Br22-168	UH098_Ibotyporanga_canudos_Br22-239	0.217
UH069_Ibotyporanga_payaya_Br22-193	UH098_Ibotyporanga_canudos_Br22-239	0.186
UH051_Ibotyporanga_guanambi_Br22-158	UH098_Ibotyporanga_canudos_Br22-239	0.211
UH068_Ibotyporanga_payaya_Br22-192	UH098_Ibotyporanga_canudos_Br22-239	0.189
UH047_Ibotyporanga_naideae_Br22-153	UH098_Ibotyporanga_canudos_Br22-239	0.237
UH048_Ibotyporanga_kiriri_Br22-154	UH098_Ibotyporanga_canudos_Br22-239	0.168
UH095_Ibotyporanga_canudos_Br22-230	UH098_Ibotyporanga_canudos_Br22-239	0.121
UH064_Ibotyporanga_emekori_Br22-183	UH098_Ibotyporanga_canudos_Br22-239	0.195

Species 1	Species 2	Distance
UH091_Ibotyporanga_diroa_Br22-225	UH098_Ibotyporanga_canudos_Br22-239	0.222
UH093_Ibotyporanga_diroa_Br22-227	UH098_Ibotyporanga_canudos_Br22-239	0.225
UH074_Ibotyporanga_guanambi?_Br22-198	UH098_Ibotyporanga_canudos_Br22-239	0.212
UH078_Ibotyporanga_canudos_Br22-203	UH098_Ibotyporanga_canudos_Br22-239	0.101
UH079_Ibotyporanga_tuxa_Br22-204	UH098_Ibotyporanga_canudos_Br22-239	0.190
UH083_Ibotyporanga_itajubaquara_Br22-212	UH098_Ibotyporanga_canudos_Br22-239	0.173
UH086_Ibotyporanga_itajubaquara_Br22-216	UH098_Ibotyporanga_canudos_Br22-239	0.170
UH177_Ibotyporanga_sertao_Carv60	UH098_Ibotyporanga_canudos_Br22-239	0.187
UH179_Ibotyporanga_sertao_Carv74	UH098_Ibotyporanga_canudos_Br22-239	0.187
UH097_Ibotyporanga_naideae_Br22-236	UH098_Ibotyporanga_canudos_Br22-239	0.242
S326_Artema_doriae_Isr40	UH302_Ibotyporanga_walekeru_Col308	0.239
N051_Pholcophora_americana_G090	UH302_Ibotyporanga_walekeru_Col308	0.232
N059_Tolteca_huahua_Mex229	UH302_Ibotyporanga_walekeru_Col308	0.240
UH345_Papiamenta_levii_Cur44	UH302_Ibotyporanga_walekeru_Col308	0.212
S443_Ibotyporanga_kanoe_Br16-303	UH302_Ibotyporanga_walekeru_Col308	0.185
JA123_Ibotyporanga_naideae_G117	UH302_Ibotyporanga_walekeru_Col308	0.186
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH302_Ibotyporanga_walekeru_Col308	0.160
N086_Ibotyporanga_Ven18-182_Ven18-182	UH302_Ibotyporanga_walekeru_Col308	0.159
N088_Ibotyporanga_bariro_Ven20-141	UH302_Ibotyporanga_walekeru_Col308	0.209
UH054_Ibotyporanga_imale?_Br22-162	UH302_Ibotyporanga_walekeru_Col308	0.252
UH061_Ibotyporanga_imale_Br22-180	UH302_Ibotyporanga_walekeru_Col308	0.253
UH082_Ibotyporanga_canudos_Br22-208	UH302_Ibotyporanga_walekeru_Col308	0.226
UH056_Ibotyporanga_imale?_Br22-168	UH302_Ibotyporanga_walekeru_Col308	0.247
UH069_Ibotyporanga_payaya_Br22-193	UH302_Ibotyporanga_walekeru_Col308	0.224
UH051_Ibotyporanga_guanambi_Br22-158	UH302_Ibotyporanga_walekeru_Col308	0.233
UH068_Ibotyporanga_payaya_Br22-192	UH302_Ibotyporanga_walekeru_Col308	0.226
UH047_Ibotyporanga_naideae_Br22-153	UH302_Ibotyporanga_walekeru_Col308	0.192
UH048_Ibotyporanga_kiriri_Br22-154	UH302_Ibotyporanga_walekeru_Col308	0.227
UH095_Ibotyporanga_canudos_Br22-230	UH302_Ibotyporanga_walekeru_Col308	0.233
UH064_Ibotyporanga_emekori_Br22-183	UH302_Ibotyporanga_walekeru_Col308	0.211
UH091_Ibotyporanga_diroa_Br22-225	UH302_Ibotyporanga_walekeru_Col308	0.206
UH093_Ibotyporanga_diroa_Br22-227	UH302_Ibotyporanga_walekeru_Col308	0.212
UH074_Ibotyporanga_guanambi?_Br22-198	UH302_Ibotyporanga_walekeru_Col308	0.196
UH078_Ibotyporanga_canudos_Br22-203	UH302_Ibotyporanga_walekeru_Col308	0.233
UH079_Ibotyporanga_tuxa_Br22-204	UH302_Ibotyporanga_walekeru_Col308	0.192
UH083_Ibotyporanga_itajubaquara_Br22-212	UH302_Ibotyporanga_walekeru_Col308	0.212
UH086_Ibotyporanga_itajubaquara_Br22-216	UH302_Ibotyporanga_walekeru_Col308	0.231
UH177_Ibotyporanga_sertao_Carv60	UH302_Ibotyporanga_walekeru_Col308	0.245
UH179_Ibotyporanga_sertao_Carv74	UH302_Ibotyporanga_walekeru_Col308	0.241
UH097_Ibotyporanga_naideae_Br22-236	UH302_Ibotyporanga_walekeru_Col308	0.195
UH098_Ibotyporanga_canudos_Br22-239	UH302_Ibotyporanga_walekeru_Col308	0.223
S326_Artema_doriae_Isr40	UH290_Ibotyporanga_walekeru?_Col292	0.246
N051_Pholcophora_americana_G090	UH290_Ibotyporanga_walekeru?_Col292	0.228
N059_Tolteca_huahua_Mex229	UH290_Ibotyporanga_walekeru?_Col292	0.225
UH345_Papiamenta_levii_Cur44	UH290_Ibotyporanga_walekeru?_Col292	0.216
S443_Ibotyporanga_kanoe_Br16-303	UH290_Ibotyporanga_walekeru?_Col292	0.184

Species 1	Species 2	Distance
JA123_Ibotyporanga_naideae_G117	UH290_Ibotyporanga_walekeru?_Col292	0.211
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH290_Ibotyporanga_walekeru?_Col292	0.179
N086_Ibotyporanga_Ven18-182_Ven18-182	UH290_Ibotyporanga_walekeru?_Col292	0.175
N088_Ibotyporanga_bariro_Ven20-141	UH290_Ibotyporanga_walekeru?_Col292	0.195
UH054_Ibotyporanga_imale?_Br22-162	UH290_Ibotyporanga_walekeru?_Col292	0.220
UH061_Ibotyporanga_imale_Br22-180	UH290_Ibotyporanga_walekeru?_Col292	0.220
UH082_Ibotyporanga_canudos_Br22-208	UH290_Ibotyporanga_walekeru?_Col292	0.207
UH056_Ibotyporanga_imale?_Br22-168	UH290_Ibotyporanga_walekeru?_Col292	0.209
UH069_Ibotyporanga_payaya_Br22-193	UH290_Ibotyporanga_walekeru?_Col292	0.229
UH051_Ibotyporanga_guanambi_Br22-158	UH290_Ibotyporanga_walekeru?_Col292	0.209
UH068_Ibotyporanga_payaya_Br22-192	UH290_Ibotyporanga_walekeru?_Col292	0.231
UH047_Ibotyporanga_naideae_Br22-153	UH290_Ibotyporanga_walekeru?_Col292	0.210
UH048_Ibotyporanga_kiriri_Br22-154	UH290_Ibotyporanga_walekeru?_Col292	0.202
UH095_Ibotyporanga_canudos_Br22-230	UH290_Ibotyporanga_walekeru?_Col292	0.209
UH064_Ibotyporanga_emekori_Br22-183	UH290_Ibotyporanga_walekeru?_Col292	0.209
UH091_Ibotyporanga_diroa_Br22-225	UH290_Ibotyporanga_walekeru?_Col292	0.220
UH093_Ibotyporanga_diroa_Br22-227	UH290_Ibotyporanga_walekeru?_Col292	0.222
UH074_Ibotyporanga_guanambi?_Br22-198	UH290_Ibotyporanga_walekeru?_Col292	0.195
UH078_Ibotyporanga_canudos_Br22-203	UH290_Ibotyporanga_walekeru?_Col292	0.211
UH079_Ibotyporanga_tuxa_Br22-204	UH290_Ibotyporanga_walekeru?_Col292	0.204
UH083_Ibotyporanga_itajubaquara_Br22-212	UH290_Ibotyporanga_walekeru?_Col292	0.219
UH086_Ibotyporanga_itajubaquara_Br22-216	UH290_Ibotyporanga_walekeru?_Col292	0.232
UH177_Ibotyporanga_sertao_Carv60	UH290_Ibotyporanga_walekeru?_Col292	0.232
UH179_Ibotyporanga_sertao_Carv74	UH290_Ibotyporanga_walekeru?_Col292	0.238
UH097_Ibotyporanga_naideae_Br22-236	UH290_Ibotyporanga_walekeru?_Col292	0.217
UH098_Ibotyporanga_canudos_Br22-239	UH290_Ibotyporanga_walekeru?_Col292	0.225
UH302_Ibotyporanga_walekeru_Col308	UH290_Ibotyporanga_walekeru?_Col292	0.120
S326_Artema_doriae_Isr40	UH473_Ibotyporanga_ziruma_Col273	0.246
N051_Pholcophora_americana_G090	UH473_Ibotyporanga_ziruma_Col273	0.231
N059_Tolteca_huahua_Mex229	UH473_Ibotyporanga_ziruma_Col273	0.209
UH345_Papiamenta_levii_Cur44	UH473_Ibotyporanga_ziruma_Col273	0.214
S443_Ibotyporanga_kanoe_Br16-303	UH473_Ibotyporanga_ziruma_Col273	0.193
JA123_Ibotyporanga_naideae_G117	UH473_Ibotyporanga_ziruma_Col273	0.210
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH473_Ibotyporanga_ziruma_Col273	0.190
N086_Ibotyporanga_Ven18-182_Ven18-182	UH473_Ibotyporanga_ziruma_Col273	0.189
N088_Ibotyporanga_bariro_Ven20-141	UH473_Ibotyporanga_ziruma_Col273	0.242
UH054_Ibotyporanga_imale?_Br22-162	UH473_Ibotyporanga_ziruma_Col273	0.237
UH061_Ibotyporanga_imale_Br22-180	UH473_Ibotyporanga_ziruma_Col273	0.238
UH082_Ibotyporanga_canudos_Br22-208	UH473_Ibotyporanga_ziruma_Col273	0.217
UH056_Ibotyporanga_imale?_Br22-168	UH473_Ibotyporanga_ziruma_Col273	0.237
UH069_Ibotyporanga_payaya_Br22-193	UH473_Ibotyporanga_ziruma_Col273	0.224
UH051_Ibotyporanga_guanambi_Br22-158	UH473_Ibotyporanga_ziruma_Col273	0.204
UH068_Ibotyporanga_payaya_Br22-192	UH473_Ibotyporanga_ziruma_Col273	0.227
UH047_Ibotyporanga_naideae_Br22-153	UH473_Ibotyporanga_ziruma_Col273	0.196
UH048_Ibotyporanga_kiriri_Br22-154	UH473_Ibotyporanga_ziruma_Col273	0.231
UH095_Ibotyporanga_canudos_Br22-230	UH473_Ibotyporanga_ziruma_Col273	0.234

Species 1	Species 2	Distance
UH064_Ibotyporanga_emekori_Br22-183	UH473_Ibotyporanga_ziruma_Col273	0.236
UH091_Ibotyporanga_diroa_Br22-225	UH473_Ibotyporanga_ziruma_Col273	0.193
UH093_Ibotyporanga_diroa_Br22-227	UH473_Ibotyporanga_ziruma_Col273	0.184
UH074_Ibotyporanga_guanambi?_Br22-198	UH473_Ibotyporanga_ziruma_Col273	0.193
UH078_Ibotyporanga_canudos_Br22-203	UH473_Ibotyporanga_ziruma_Col273	0.223
UH079_Ibotyporanga_tuxa_Br22-204	UH473_Ibotyporanga_ziruma_Col273	0.213
UH083_Ibotyporanga_itajubaquara_Br22-212	UH473_Ibotyporanga_ziruma_Col273	0.229
UH086_Ibotyporanga_itajubaquara_Br22-216	UH473_Ibotyporanga_ziruma_Col273	0.239
UH177_Ibotyporanga_sertao_Carv60	UH473_Ibotyporanga_ziruma_Col273	0.247
UH179_Ibotyporanga_sertao_Carv74	UH473_Ibotyporanga_ziruma_Col273	0.243
UH097_Ibotyporanga_naideae_Br22-236	UH473_Ibotyporanga_ziruma_Col273	0.203
UH098_Ibotyporanga_canudos_Br22-239	UH473_Ibotyporanga_ziruma_Col273	0.236
UH302_Ibotyporanga_walekeru_Col308	UH473_Ibotyporanga_ziruma_Col273	0.189
UH290_Ibotyporanga_walekeru?_Col292	UH473_Ibotyporanga_ziruma_Col273	0.197
S326_Artema_doriae_Isr40	UH471_Ibotyporanga_bariro_Ven20-141	0.249
N051_Pholcophora_americana_G090	UH471_Ibotyporanga_bariro_Ven20-141	0.246
N059_Tolteca_huahua_Mex229	UH471_Ibotyporanga_bariro_Ven20-141	0.276
UH345_Papiamenta_levii_Cur44	UH471_Ibotyporanga_bariro_Ven20-141	0.202
S443_Ibotyporanga_kanoe_Br16-303	UH471_Ibotyporanga_bariro_Ven20-141	0.220
JA123_Ibotyporanga_naideae_G117	UH471_Ibotyporanga_bariro_Ven20-141	0.199
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH471_Ibotyporanga_bariro_Ven20-141	0.215
N086_Ibotyporanga_Ven18-182_Ven18-182	UH471_Ibotyporanga_bariro_Ven20-141	0.205
N088_Ibotyporanga_bariro_Ven20-141	UH471_Ibotyporanga_bariro_Ven20-141	0.000
UH054_Ibotyporanga_imale?_Br22-162	UH471_Ibotyporanga_bariro_Ven20-141	0.271
UH061_Ibotyporanga_imale_Br22-180	UH471_Ibotyporanga_bariro_Ven20-141	0.290
UH082_Ibotyporanga_canudos_Br22-208	UH471_Ibotyporanga_bariro_Ven20-141	0.274
UH056_Ibotyporanga_imale?_Br22-168	UH471_Ibotyporanga_bariro_Ven20-141	0.250
UH069_Ibotyporanga_payaya_Br22-193	UH471_Ibotyporanga_bariro_Ven20-141	0.264
UH051_Ibotyporanga_guanambi_Br22-158	UH471_Ibotyporanga_bariro_Ven20-141	0.232
UH068_Ibotyporanga_payaya_Br22-192	UH471_Ibotyporanga_bariro_Ven20-141	0.261
UH047_Ibotyporanga_naideae_Br22-153	UH471_Ibotyporanga_bariro_Ven20-141	0.205
UH048_Ibotyporanga_kiriri_Br22-154	UH471_Ibotyporanga_bariro_Ven20-141	0.242
UH095_Ibotyporanga_canudos_Br22-230	UH471_Ibotyporanga_bariro_Ven20-141	0.258
UH064_Ibotyporanga_emekori_Br22-183	UH471_Ibotyporanga_bariro_Ven20-141	0.265
UH091_Ibotyporanga_diroa_Br22-225	UH471_Ibotyporanga_bariro_Ven20-141	0.240
UH093_Ibotyporanga_diroa_Br22-227	UH471_Ibotyporanga_bariro_Ven20-141	0.231
UH074_Ibotyporanga_guanambi?_Br22-198	UH471_Ibotyporanga_bariro_Ven20-141	0.231
UH078_Ibotyporanga_canudos_Br22-203	UH471_Ibotyporanga_bariro_Ven20-141	0.267
UH079_Ibotyporanga_tuxa_Br22-204	UH471_Ibotyporanga_bariro_Ven20-141	0.259
UH083_Ibotyporanga_itajubaquara_Br22-212	UH471_Ibotyporanga_bariro_Ven20-141	0.265
UH086_Ibotyporanga_itajubaquara_Br22-216	UH471_Ibotyporanga_bariro_Ven20-141	0.272
UH177_Ibotyporanga_sertao_Carv60	UH471_Ibotyporanga_bariro_Ven20-141	0.244
UH179_Ibotyporanga_sertao_Carv74	UH471_Ibotyporanga_bariro_Ven20-141	0.245
UH097_Ibotyporanga_naideae_Br22-236	UH471_Ibotyporanga_bariro_Ven20-141	0.212
UH098_Ibotyporanga_canudos_Br22-239	UH471_Ibotyporanga_bariro_Ven20-141	0.264
UH302_Ibotyporanga_walekeru_Col308	UH471_Ibotyporanga_bariro_Ven20-141	0.209



Species 1	Species 2	Distance
UH290_Ibotyporanga_walekeru?_Col292	UH471_Ibotyporanga_bariro_Ven20-141	0.195
UH473_Ibotyporanga_ziruma_Col273	UH471_Ibotyporanga_bariro_Ven20-141	0.242
S326_Artema_doriae_Isr40	UH515_Ibotyporanga_sertao_Carv72	0.257
N051_Pholcophora_americana_G090	UH515_Ibotyporanga_sertao_Carv72	0.229
N059_Tolteca_huahua_Mex229	UH515_Ibotyporanga_sertao_Carv72	0.233
UH345_Papiamenta_levii_Cur44	UH515_Ibotyporanga_sertao_Carv72	0.216
S443_Ibotyporanga_kanoe_Br16-303	UH515_Ibotyporanga_sertao_Carv72	0.193
JA123_Ibotyporanga_naideae_G117	UH515_Ibotyporanga_sertao_Carv72	0.249
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH515_Ibotyporanga_sertao_Carv72	0.253
N086_Ibotyporanga_Ven18-182_Ven18-182	UH515_Ibotyporanga_sertao_Carv72	0.242
N088_Ibotyporanga_bariro_Ven20-141	UH515_Ibotyporanga_sertao_Carv72	0.240
UH054_Ibotyporanga_imale?_Br22-162	UH515_Ibotyporanga_sertao_Carv72	0.216
UH061_Ibotyporanga_imale_Br22-180	UH515_Ibotyporanga_sertao_Carv72	0.222
UH082_Ibotyporanga_canudos_Br22-208	UH515_Ibotyporanga_sertao_Carv72	0.196
UH056_Ibotyporanga_imale?_Br22-168	UH515_Ibotyporanga_sertao_Carv72	0.238
UH069_Ibotyporanga_payaya_Br22-193	UH515_Ibotyporanga_sertao_Carv72	0.216
UH051_Ibotyporanga_guanambi_Br22-158	UH515_Ibotyporanga_sertao_Carv72	0.196
UH068_Ibotyporanga_payaya_Br22-192	UH515_Ibotyporanga_sertao_Carv72	0.218
UH047_Ibotyporanga_naideae_Br22-153	UH515_Ibotyporanga_sertao_Carv72	0.207
UH048_Ibotyporanga_kiriri_Br22-154	UH515_Ibotyporanga_sertao_Carv72	0.210
UH095_Ibotyporanga_canudos_Br22-230	UH515_Ibotyporanga_sertao_Carv72	0.194
UH064_Ibotyporanga_emekori_Br22-183	UH515_Ibotyporanga_sertao_Carv72	0.178
UH091_Ibotyporanga_diroa_Br22-225	UH515_Ibotyporanga_sertao_Carv72	0.189
UH093_Ibotyporanga_diroa_Br22-227	UH515_Ibotyporanga_sertao_Carv72	0.208
UH074_Ibotyporanga_guanambi?_Br22-198	UH515_Ibotyporanga_sertao_Carv72	0.206
UH078_Ibotyporanga_canudos_Br22-203	UH515_Ibotyporanga_sertao_Carv72	0.194
UH079_Ibotyporanga_tuxa_Br22-204	UH515_Ibotyporanga_sertao_Carv72	0.190
UH083_Ibotyporanga_itajubaquara_Br22-212	UH515_Ibotyporanga_sertao_Carv72	0.186
UH086_Ibotyporanga_itajubaquara_Br22-216	UH515_Ibotyporanga_sertao_Carv72	0.189
UH177_Ibotyporanga_sertao_Carv60	UH515_Ibotyporanga_sertao_Carv72	0.025
UH179_Ibotyporanga_sertao_Carv74	UH515_Ibotyporanga_sertao_Carv72	0.003
UH097_Ibotyporanga_naideae_Br22-236	UH515_Ibotyporanga_sertao_Carv72	0.215
UH098_Ibotyporanga_canudos_Br22-239	UH515_Ibotyporanga_sertao_Carv72	0.189
UH302_Ibotyporanga_walekeru_Col308	UH515_Ibotyporanga_sertao_Carv72	0.234
UH290_Ibotyporanga_walekeru?_Col292	UH515_Ibotyporanga_sertao_Carv72	0.230
UH473_Ibotyporanga_ziruma_Col273	UH515_Ibotyporanga_sertao_Carv72	0.238
UH471_Ibotyporanga_bariro_Ven20-141	UH515_Ibotyporanga_sertao_Carv72	0.240
S326_Artema_doriae_Isr40	UH499_Ibotyporanga_emekori_Br22-224	0.243
N051_Pholcophora_americana_G090	UH499_Ibotyporanga_emekori_Br22-224	0.215
N059_Tolteca_huahua_Mex229	UH499_Ibotyporanga_emekori_Br22-224	0.200
UH345_Papiamenta_levii_Cur44	UH499_Ibotyporanga_emekori_Br22-224	0.203
S443_Ibotyporanga_kanoe_Br16-303	UH499_Ibotyporanga_emekori_Br22-224	0.157
JA123_Ibotyporanga_naideae_G117	UH499_Ibotyporanga_emekori_Br22-224	0.202
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH499_Ibotyporanga_emekori_Br22-224	0.211
N086_Ibotyporanga_Ven18-182_Ven18-182	UH499_Ibotyporanga_emekori_Br22-224	0.206
N088_Ibotyporanga_bariro_Ven20-141	UH499_Ibotyporanga_emekori_Br22-224	0.237

Species 1	Species 2	Distance
UH054_Ibotyporanga_imale?_Br22-162	UH499_Ibotyporanga_emekori_Br22-224	0.204
UH061_Ibotyporanga_imale_Br22-180	UH499_Ibotyporanga_emekori_Br22-224	0.215
UH082_Ibotyporanga_canudos_Br22-208	UH499_Ibotyporanga_emekori_Br22-224	0.160
UH056_Ibotyporanga_imale?_Br22-168	UH499_Ibotyporanga_emekori_Br22-224	0.186
UH069_Ibotyporanga_payaya_Br22-193	UH499_Ibotyporanga_emekori_Br22-224	0.160
UH051_Ibotyporanga_guanambi_Br22-158	UH499_Ibotyporanga_emekori_Br22-224	0.183
UH068_Ibotyporanga_payaya_Br22-192	UH499_Ibotyporanga_emekori_Br22-224	0.162
UH047_Ibotyporanga_naideae_Br22-153	UH499_Ibotyporanga_emekori_Br22-224	0.196
UH048_Ibotyporanga_kiriri_Br22-154	UH499_Ibotyporanga_emekori_Br22-224	0.160
UH095_Ibotyporanga_canudos_Br22-230	UH499_Ibotyporanga_emekori_Br22-224	0.158
UH064_Ibotyporanga_emekori_Br22-183	UH499_Ibotyporanga_emekori_Br22-224	0.141
UH091_Ibotyporanga_diroa_Br22-225	UH499_Ibotyporanga_emekori_Br22-224	0.180
UH093_Ibotyporanga_diroa_Br22-227	UH499_Ibotyporanga_emekori_Br22-224	0.194
UH074_Ibotyporanga_guanambi?_Br22-198	UH499_Ibotyporanga_emekori_Br22-224	0.198
UH078_Ibotyporanga_canudos_Br22-203	UH499_Ibotyporanga_emekori_Br22-224	0.162
UH079_Ibotyporanga_tuxa_Br22-204	UH499_Ibotyporanga_emekori_Br22-224	0.146
UH083_Ibotyporanga_itajubaquara_Br22-212	UH499_Ibotyporanga_emekori_Br22-224	0.172
UH086_Ibotyporanga_itajubaquara_Br22-216	UH499_Ibotyporanga_emekori_Br22-224	0.186
UH177_Ibotyporanga_sertao_Carv60	UH499_Ibotyporanga_emekori_Br22-224	0.190
UH179_Ibotyporanga_sertao_Carv74	UH499_Ibotyporanga_emekori_Br22-224	0.194
UH097_Ibotyporanga_naideae_Br22-236	UH499_Ibotyporanga_emekori_Br22-224	0.199
UH098_Ibotyporanga_canudos_Br22-239	UH499_Ibotyporanga_emekori_Br22-224	0.179
UH302_Ibotyporanga_walekeru_Col308	UH499_Ibotyporanga_emekori_Br22-224	0.200
UH290_Ibotyporanga_walekeru?_Col292	UH499_Ibotyporanga_emekori_Br22-224	0.196
UH473_Ibotyporanga_ziruma_Col273	UH499_Ibotyporanga_emekori_Br22-224	0.211
UH471_Ibotyporanga_bariro_Ven20-141	UH499_Ibotyporanga_emekori_Br22-224	0.237
UH515_Ibotyporanga_sertao_Carv72	UH499_Ibotyporanga_emekori_Br22-224	0.189
S326_Artema_doriae_Isr40	UH498_Ibotyporanga_xique_Br22-220	0.276
N051_Pholcophora_americana_G090	UH498_Ibotyporanga_xique_Br22-220	0.206
N059_Tolteca_huahua_Mex229	UH498_Ibotyporanga_xique_Br22-220	0.207
UH345_Papiamenta_levii_Cur44	UH498_Ibotyporanga_xique_Br22-220	0.219
S443_Ibotyporanga_kanoe_Br16-303	UH498_Ibotyporanga_xique_Br22-220	0.201
JA123_Ibotyporanga_naideae_G117	UH498_Ibotyporanga_xique_Br22-220	0.224
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH498_Ibotyporanga_xique_Br22-220	0.264
N086_Ibotyporanga_Ven18-182_Ven18-182	UH498_Ibotyporanga_xique_Br22-220	0.261
N088_Ibotyporanga_bariro_Ven20-141	UH498_Ibotyporanga_xique_Br22-220	0.266
UH054_Ibotyporanga_imale?_Br22-162	UH498_Ibotyporanga_xique_Br22-220	0.194
UH061_Ibotyporanga_imale_Br22-180	UH498_Ibotyporanga_xique_Br22-220	0.228
UH082_Ibotyporanga_canudos_Br22-208	UH498_Ibotyporanga_xique_Br22-220	0.212
UH056_Ibotyporanga_imale?_Br22-168	UH498_Ibotyporanga_xique_Br22-220	0.196
UH069_Ibotyporanga_payaya_Br22-193	UH498_Ibotyporanga_xique_Br22-220	0.229
UH051_Ibotyporanga_guanambi_Br22-158	UH498_Ibotyporanga_xique_Br22-220	0.187
UH068_Ibotyporanga_payaya_Br22-192	UH498_Ibotyporanga_xique_Br22-220	0.227
UH047_Ibotyporanga_naideae_Br22-153	UH498_Ibotyporanga_xique_Br22-220	0.221
UH048_Ibotyporanga_kiriri_Br22-154	UH498_Ibotyporanga_xique_Br22-220	0.234
UH095_Ibotyporanga_canudos_Br22-230	UH498_Ibotyporanga_xique_Br22-220	0.199

Species 1	Species 2	Distance
UH064_Ibotyporanga_emekori_Br22-183	UH498_Ibotyporanga_xique_Br22-220	0.214
UH091_Ibotyporanga_diroa_Br22-225	UH498_Ibotyporanga_xique_Br22-220	0.192
UH093_Ibotyporanga_diroa_Br22-227	UH498_Ibotyporanga_xique_Br22-220	0.189
UH074_Ibotyporanga_guanambi?_Br22-198	UH498_Ibotyporanga_xique_Br22-220	0.186
UH078_Ibotyporanga_canudos_Br22-203	UH498_Ibotyporanga_xique_Br22-220	0.220
UH079_Ibotyporanga_tuxa_Br22-204	UH498_Ibotyporanga_xique_Br22-220	0.197
UH083_Ibotyporanga_itajubaquara_Br22-212	UH498_Ibotyporanga_xique_Br22-220	0.225
UH086_Ibotyporanga_itajubaquara_Br22-216	UH498_Ibotyporanga_xique_Br22-220	0.223
UH177_Ibotyporanga_sertao_Carv60	UH498_Ibotyporanga_xique_Br22-220	0.219
UH179_Ibotyporanga_sertao_Carv74	UH498_Ibotyporanga_xique_Br22-220	0.226
UH097_Ibotyporanga_naideae_Br22-236	UH498_Ibotyporanga_xique_Br22-220	0.222
UH098_Ibotyporanga_canudos_Br22-239	UH498_Ibotyporanga_xique_Br22-220	0.225
UH302_Ibotyporanga_walekeru_Col308	UH498_Ibotyporanga_xique_Br22-220	0.244
UH290_Ibotyporanga_walekeru?_Col292	UH498_Ibotyporanga_xique_Br22-220	0.255
UH473_Ibotyporanga_ziruma_Col273	UH498_Ibotyporanga_xique_Br22-220	0.216
UH471_Ibotyporanga_bariro_Ven20-141	UH498_Ibotyporanga_xique_Br22-220	0.266
UH515_Ibotyporanga_sertao_Carv72	UH498_Ibotyporanga_xique_Br22-220	0.225
UH499_Ibotyporanga_emekori_Br22-224	UH498_Ibotyporanga_xique_Br22-220	0.199
S326_Artema_doriae_Isr40	UH553_Ibotyporanga_piojo_Col316	0.240
N051_Pholcophora_americana_G090	UH553_Ibotyporanga_piojo_Col316	0.258
N059_Tolteca_huahua_Mex229	UH553_Ibotyporanga_piojo_Col316	0.207
UH345_Papiamenta_levii_Cur44	UH553_Ibotyporanga_piojo_Col316	0.231
S443_Ibotyporanga_kanoe_Br16-303	UH553_Ibotyporanga_piojo_Col316	0.202
JA123_Ibotyporanga_naideae_G117	UH553_Ibotyporanga_piojo_Col316	0.183
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH553_Ibotyporanga_piojo_Col316	0.169
N086_Ibotyporanga_Ven18-182_Ven18-182	UH553_Ibotyporanga_piojo_Col316	0.173
N088_Ibotyporanga_bariro_Ven20-141	UH553_Ibotyporanga_piojo_Col316	0.224
UH054_Ibotyporanga_imale?_Br22-162	UH553_Ibotyporanga_piojo_Col316	0.250
UH061_Ibotyporanga_imale_Br22-180	UH553_Ibotyporanga_piojo_Col316	0.252
UH082_Ibotyporanga_canudos_Br22-208	UH553_Ibotyporanga_piojo_Col316	0.234
UH056_Ibotyporanga_imale?_Br22-168	UH553_Ibotyporanga_piojo_Col316	0.246
UH069_Ibotyporanga_payaya_Br22-193	UH553_Ibotyporanga_piojo_Col316	0.210
UH051_Ibotyporanga_guanambi_Br22-158	UH553_Ibotyporanga_piojo_Col316	0.226
UH068_Ibotyporanga_payaya_Br22-192	UH553_Ibotyporanga_piojo_Col316	0.212
UH047_Ibotyporanga_naideae_Br22-153	UH553_Ibotyporanga_piojo_Col316	0.176
UH048_Ibotyporanga_kiriri_Br22-154	UH553_Ibotyporanga_piojo_Col316	0.234
UH095_Ibotyporanga_canudos_Br22-230	UH553_Ibotyporanga_piojo_Col316	0.236
UH064_Ibotyporanga_emekori_Br22-183	UH553_Ibotyporanga_piojo_Col316	0.233
UH091_Ibotyporanga_diroa_Br22-225	UH553_Ibotyporanga_piojo_Col316	0.234
UH093_Ibotyporanga_diroa_Br22-227	UH553_Ibotyporanga_piojo_Col316	0.231
UH074_Ibotyporanga_guanambi?_Br22-198	UH553_Ibotyporanga_piojo_Col316	0.201
UH078_Ibotyporanga_canudos_Br22-203	UH553_Ibotyporanga_piojo_Col316	0.234
UH079_Ibotyporanga_tuxa_Br22-204	UH553_Ibotyporanga_piojo_Col316	0.224
UH083_Ibotyporanga_itajubaquara_Br22-212	UH553_Ibotyporanga_piojo_Col316	0.236
UH086_Ibotyporanga_itajubaquara_Br22-216	UH553_Ibotyporanga_piojo_Col316	0.240
UH177_Ibotyporanga_sertao_Carv60	UH553_Ibotyporanga_piojo_Col316	0.234

Species 1	Species 2	Distance
UH179_Ibotyporanga_sertao_Carv74	UH553_Ibotyporanga_piojo_Col316	0.230
UH097_Ibotyporanga_naideae_Br22-236	UH553_Ibotyporanga_piojo_Col316	0.178
UH098_Ibotyporanga_canudos_Br22-239	UH553_Ibotyporanga_piojo_Col316	0.251
UH302_Ibotyporanga_walekeru_Col308	UH553_Ibotyporanga_piojo_Col316	0.184
UH290_Ibotyporanga_walekeru?_Col292	UH553_Ibotyporanga_piojo_Col316	0.189
UH473_Ibotyporanga_ziruma_Col273	UH553_Ibotyporanga_piojo_Col316	0.180
UH471_Ibotyporanga_bariro_Ven20-141	UH553_Ibotyporanga_piojo_Col316	0.224
UH515_Ibotyporanga_sertao_Carv72	UH553_Ibotyporanga_piojo_Col316	0.224
UH499_Ibotyporanga_emekori_Br22-224	UH553_Ibotyporanga_piojo_Col316	0.202
UH498_Ibotyporanga_xique_Br22-220	UH553_Ibotyporanga_piojo_Col316	0.244
S326_Artema_doriae_Isr40	UH484_Ibotyporanga_imale?_Br22-160	0.284
N051_Pholcophora_americana_G090	UH484_Ibotyporanga_imale?_Br22-160	0.256
N059_Tolteca_huahua_Mex229	UH484_Ibotyporanga_imale?_Br22-160	0.231
UH345_Papiamenta_levii_Cur44	UH484_Ibotyporanga_imale?_Br22-160	0.217
S443_Ibotyporanga_kanoe_Br16-303	UH484_Ibotyporanga_imale?_Br22-160	0.188
JA123_Ibotyporanga_naideae_G117	UH484_Ibotyporanga_imale?_Br22-160	0.222
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH484_Ibotyporanga_imale?_Br22-160	0.235
N086_Ibotyporanga_Ven18-182_Ven18-182	UH484_Ibotyporanga_imale?_Br22-160	0.225
N088_Ibotyporanga_bariro_Ven20-141	UH484_Ibotyporanga_imale?_Br22-160	0.236
UH054_Ibotyporanga_imale?_Br22-162	UH484_Ibotyporanga_imale?_Br22-160	0.152
UH061_Ibotyporanga_imale_Br22-180	UH484_Ibotyporanga_imale?_Br22-160	0.162
UH082_Ibotyporanga_canudos_Br22-208	UH484_Ibotyporanga_imale?_Br22-160	0.215
UH056_Ibotyporanga_imale?_Br22-168	UH484_Ibotyporanga_imale?_Br22-160	0.150
UH069_Ibotyporanga_payaya_Br22-193	UH484_Ibotyporanga_imale?_Br22-160	0.228
UH051_Ibotyporanga_guanambi_Br22-158	UH484_Ibotyporanga_imale?_Br22-160	0.224
UH068_Ibotyporanga_payaya_Br22-192	UH484_Ibotyporanga_imale?_Br22-160	0.225
UH047_Ibotyporanga_naideae_Br22-153	UH484_Ibotyporanga_imale?_Br22-160	0.218
UH048_Ibotyporanga_kiriri_Br22-154	UH484_Ibotyporanga_imale?_Br22-160	0.224
UH095_Ibotyporanga_canudos_Br22-230	UH484_Ibotyporanga_imale?_Br22-160	0.217
UH064_Ibotyporanga_emekori_Br22-183	UH484_Ibotyporanga_imale?_Br22-160	0.211
UH091_Ibotyporanga_diroa_Br22-225	UH484_Ibotyporanga_imale?_Br22-160	0.237
UH093_Ibotyporanga_diroa_Br22-227	UH484_Ibotyporanga_imale?_Br22-160	0.233
UH074_Ibotyporanga_guanambi?_Br22-198	UH484_Ibotyporanga_imale?_Br22-160	0.226
UH078_Ibotyporanga_canudos_Br22-203	UH484_Ibotyporanga_imale?_Br22-160	0.219
UH079_Ibotyporanga_tuxa_Br22-204	UH484_Ibotyporanga_imale?_Br22-160	0.238
UH083_Ibotyporanga_itajubaquara_Br22-212	UH484_Ibotyporanga_imale?_Br22-160	0.234
UH086_Ibotyporanga_itajubaquara_Br22-216	UH484_Ibotyporanga_imale?_Br22-160	0.235
UH177_Ibotyporanga_sertao_Carv60	UH484_Ibotyporanga_imale?_Br22-160	0.237
UH179_Ibotyporanga_sertao_Carv74	UH484_Ibotyporanga_imale?_Br22-160	0.240
UH097_Ibotyporanga_naideae_Br22-236	UH484_Ibotyporanga_imale?_Br22-160	0.221
UH098_Ibotyporanga_canudos_Br22-239	UH484_Ibotyporanga_imale?_Br22-160	0.244
UH302_Ibotyporanga_walekeru_Col308	UH484_Ibotyporanga_imale?_Br22-160	0.233
UH290_Ibotyporanga_walekeru?_Col292	UH484_Ibotyporanga_imale?_Br22-160	0.207
UH473_Ibotyporanga_ziruma_Col273	UH484_Ibotyporanga_imale?_Br22-160	0.222
UH471_Ibotyporanga_bariro_Ven20-141	UH484_Ibotyporanga_imale?_Br22-160	0.236
UH515_Ibotyporanga_sertao_Carv72	UH484_Ibotyporanga_imale?_Br22-160	0.234

Species 1	Species 2	Distance
UH499_Ibotyporanga_emekori_Br22-224	UH484_Ibotyporanga_imale?_Br22-160	0.205
UH498_Ibotyporanga_xique_Br22-220	UH484_Ibotyporanga_imale?_Br22-160	0.224
UH553_Ibotyporanga_piojo_Col316	UH484_Ibotyporanga_imale?_Br22-160	0.220
S326_Artema_doriae_Isr40	UH508_Ibotyporanga_sertao_Br22-253	0.251
N051_Pholcophora_americana_G090	UH508_Ibotyporanga_sertao_Br22-253	0.218
N059_Tolteca_huahua_Mex229	UH508_Ibotyporanga_sertao_Br22-253	0.232
UH345_Papiamenta_levii_Cur44	UH508_Ibotyporanga_sertao_Br22-253	0.224
S443_Ibotyporanga_kanoe_Br16-303	UH508_Ibotyporanga_sertao_Br22-253	0.198
JA123_Ibotyporanga_naideae_G117	UH508_Ibotyporanga_sertao_Br22-253	0.250
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH508_Ibotyporanga_sertao_Br22-253	0.255
N086_Ibotyporanga_Ven18-182_Ven18-182	UH508_Ibotyporanga_sertao_Br22-253	0.249
N088_Ibotyporanga_bariro_Ven20-141	UH508_Ibotyporanga_sertao_Br22-253	0.251
UH054_Ibotyporanga_imale?_Br22-162	UH508_Ibotyporanga_sertao_Br22-253	0.218
UH061_Ibotyporanga_imale_Br22-180	UH508_Ibotyporanga_sertao_Br22-253	0.221
UH082_Ibotyporanga_canudos_Br22-208	UH508_Ibotyporanga_sertao_Br22-253	0.199
UH056_Ibotyporanga_imale?_Br22-168	UH508_Ibotyporanga_sertao_Br22-253	0.232
UH069_Ibotyporanga_payaya_Br22-193	UH508_Ibotyporanga_sertao_Br22-253	0.213
UH051_Ibotyporanga_guanambi_Br22-158	UH508_Ibotyporanga_sertao_Br22-253	0.196
UH068_Ibotyporanga_payaya_Br22-192	UH508_Ibotyporanga_sertao_Br22-253	0.215
UH047_Ibotyporanga_naideae_Br22-153	UH508_Ibotyporanga_sertao_Br22-253	0.207
UH048_Ibotyporanga_kiriri_Br22-154	UH508_Ibotyporanga_sertao_Br22-253	0.204
UH095_Ibotyporanga_canudos_Br22-230	UH508_Ibotyporanga_sertao_Br22-253	0.188
UH064_Ibotyporanga_emekori_Br22-183	UH508_Ibotyporanga_sertao_Br22-253	0.188
UH091_Ibotyporanga_diroa_Br22-225	UH508_Ibotyporanga_sertao_Br22-253	0.189
UH093_Ibotyporanga_diroa_Br22-227	UH508_Ibotyporanga_sertao_Br22-253	0.214
UH074_Ibotyporanga_guanambi?_Br22-198	UH508_Ibotyporanga_sertao_Br22-253	0.206
UH078_Ibotyporanga_canudos_Br22-203	UH508_Ibotyporanga_sertao_Br22-253	0.197
UH079_Ibotyporanga_tuxa_Br22-204	UH508_Ibotyporanga_sertao_Br22-253	0.193
UH083_Ibotyporanga_itajubaquara_Br22-212	UH508_Ibotyporanga_sertao_Br22-253	0.186
UH086_Ibotyporanga_itajubaquara_Br22-216	UH508_Ibotyporanga_sertao_Br22-253	0.190
UH177_Ibotyporanga_sertao_Carv60	UH508_Ibotyporanga_sertao_Br22-253	0.030
UH179_Ibotyporanga_sertao_Carv74	UH508_Ibotyporanga_sertao_Br22-253	0.024
UH097_Ibotyporanga_naideae_Br22-236	UH508_Ibotyporanga_sertao_Br22-253	0.213
UH098_Ibotyporanga_canudos_Br22-239	UH508_Ibotyporanga_sertao_Br22-253	0.194
UH302_Ibotyporanga_walekeru_Col308	UH508_Ibotyporanga_sertao_Br22-253	0.236
UH290_Ibotyporanga_walekeru?_Col292	UH508_Ibotyporanga_sertao_Br22-253	0.228
UH473_Ibotyporanga_ziruma_Col273	UH508_Ibotyporanga_sertao_Br22-253	0.247
UH471_Ibotyporanga_bariro_Ven20-141	UH508_Ibotyporanga_sertao_Br22-253	0.251
UH515_Ibotyporanga_sertao_Carv72	UH508_Ibotyporanga_sertao_Br22-253	0.020
UH499_Ibotyporanga_emekori_Br22-224	UH508_Ibotyporanga_sertao_Br22-253	0.186
UH498_Ibotyporanga_xique_Br22-220	UH508_Ibotyporanga_sertao_Br22-253	0.225
UH553_Ibotyporanga_piojo_Col316	UH508_Ibotyporanga_sertao_Br22-253	0.221
UH484_Ibotyporanga_imale?_Br22-160	UH508_Ibotyporanga_sertao_Br22-253	0.242
S326_Artema_doriae_Isr40	UH506_Ibotyporanga_sertao_Br22-246	0.244
N051_Pholcophora_americana_G090	UH506_Ibotyporanga_sertao_Br22-246	0.220
N059_Tolteca_huahua_Mex229	UH506_Ibotyporanga_sertao_Br22-246	0.216

Species 1	Species 2	Distance
UH345_Papiamenta_levii_Cur44	UH506_Ibotyporanga_sertao_Br22-246	0.210
S443_Ibotyporanga_kanoe_Br16-303	UH506_Ibotyporanga_sertao_Br22-246	0.194
JA123_Ibotyporanga_naideae_G117	UH506_Ibotyporanga_sertao_Br22-246	0.258
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH506_Ibotyporanga_sertao_Br22-246	0.246
N086_Ibotyporanga_Ven18-182_Ven18-182	UH506_Ibotyporanga_sertao_Br22-246	0.234
N088_Ibotyporanga_bariro_Ven20-141	UH506_Ibotyporanga_sertao_Br22-246	0.239
UH054_Ibotyporanga_imale?_Br22-162	UH506_Ibotyporanga_sertao_Br22-246	0.221
UH061_Ibotyporanga_imale_Br22-180	UH506_Ibotyporanga_sertao_Br22-246	0.231
UH082_Ibotyporanga_canudos_Br22-208	UH506_Ibotyporanga_sertao_Br22-246	0.190
UH056_Ibotyporanga_imale?_Br22-168	UH506_Ibotyporanga_sertao_Br22-246	0.224
UH069_Ibotyporanga_payaya_Br22-193	UH506_Ibotyporanga_sertao_Br22-246	0.221
UH051_Ibotyporanga_guanambi_Br22-158	UH506_Ibotyporanga_sertao_Br22-246	0.189
UH068_Ibotyporanga_payaya_Br22-192	UH506_Ibotyporanga_sertao_Br22-246	0.223
UH047_Ibotyporanga_naideae_Br22-153	UH506_Ibotyporanga_sertao_Br22-246	0.219
UH048_Ibotyporanga_kiriri_Br22-154	UH506_Ibotyporanga_sertao_Br22-246	0.196
UH095_Ibotyporanga_canudos_Br22-230	UH506_Ibotyporanga_sertao_Br22-246	0.180
UH064_Ibotyporanga_emekori_Br22-183	UH506_Ibotyporanga_sertao_Br22-246	0.171
UH091_Ibotyporanga_diroa_Br22-225	UH506_Ibotyporanga_sertao_Br22-246	0.184
UH093_Ibotyporanga_diroa_Br22-227	UH506_Ibotyporanga_sertao_Br22-246	0.193
UH074_Ibotyporanga_guanambi?_Br22-198	UH506_Ibotyporanga_sertao_Br22-246	0.216
UH078_Ibotyporanga_canudos_Br22-203	UH506_Ibotyporanga_sertao_Br22-246	0.188
UH079_Ibotyporanga_tuxa_Br22-204	UH506_Ibotyporanga_sertao_Br22-246	0.176
UH083_Ibotyporanga_itajubaquara_Br22-212	UH506_Ibotyporanga_sertao_Br22-246	0.179
UH086_Ibotyporanga_itajubaquara_Br22-216	UH506_Ibotyporanga_sertao_Br22-246	0.186
UH177_Ibotyporanga_sertao_Carv60	UH506_Ibotyporanga_sertao_Br22-246	0.016
UH179_Ibotyporanga_sertao_Carv74	UH506_Ibotyporanga_sertao_Br22-246	0.037
UH097_Ibotyporanga_naideae_Br22-236	UH506_Ibotyporanga_sertao_Br22-246	0.226
UH098_Ibotyporanga_canudos_Br22-239	UH506_Ibotyporanga_sertao_Br22-246	0.176
UH302_Ibotyporanga_walekeru_Col308	UH506_Ibotyporanga_sertao_Br22-246	0.248
UH290_Ibotyporanga_walekeru?_Col292	UH506_Ibotyporanga_sertao_Br22-246	0.231
UH473_Ibotyporanga_ziruma_Col273	UH506_Ibotyporanga_sertao_Br22-246	0.246
UH471_Ibotyporanga_bariro_Ven20-141	UH506_Ibotyporanga_sertao_Br22-246	0.239
UH515_Ibotyporanga_sertao_Carv72	UH506_Ibotyporanga_sertao_Br22-246	0.037
UH499_Ibotyporanga_emekori_Br22-224	UH506_Ibotyporanga_sertao_Br22-246	0.180
UH498_Ibotyporanga_xique_Br22-220	UH506_Ibotyporanga_sertao_Br22-246	0.216
UH553_Ibotyporanga_piojo_Col316	UH506_Ibotyporanga_sertao_Br22-246	0.233
UH484_Ibotyporanga_imale?_Br22-160	UH506_Ibotyporanga_sertao_Br22-246	0.238
UH508_Ibotyporanga_sertao_Br22-253	UH506_Ibotyporanga_sertao_Br22-246	0.042
S326_Artema_doriae_Isr40	UH516_Ibotyporanga_amosae_Carv82	0.242
N051_Pholcophora_americana_G090	UH516_Ibotyporanga_amosae_Carv82	0.243
N059_Tolteca_huahua_Mex229	UH516_Ibotyporanga_amosae_Carv82	0.219
UH345_Papiamenta_levii_Cur44	UH516_Ibotyporanga_amosae_Carv82	0.202
S443_Ibotyporanga_kanoe_Br16-303	UH516_Ibotyporanga_amosae_Carv82	0.165
JA123_Ibotyporanga_naideae_G117	UH516_Ibotyporanga_amosae_Carv82	0.207
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH516_Ibotyporanga_amosae_Carv82	0.216
N086_Ibotyporanga_Ven18-182_Ven18-182	UH516_Ibotyporanga_amosae_Carv82	0.212

Species 1	Species 2	Distance
N088_Ibotyporanga_bariro_Ven20-141	UH516_Ibotyporanga_amosae_Carv82	0.255
UH054_Ibotyporanga_imale?_Br22-162	UH516_Ibotyporanga_amosae_Carv82	0.159
UH061_Ibotyporanga_imale_Br22-180	UH516_Ibotyporanga_amosae_Carv82	0.183
UH082_Ibotyporanga_canudos_Br22-208	UH516_Ibotyporanga_amosae_Carv82	0.192
UH056_Ibotyporanga_imale?_Br22-168	UH516_Ibotyporanga_amosae_Carv82	0.158
UH069_Ibotyporanga_payaya_Br22-193	UH516_Ibotyporanga_amosae_Carv82	0.182
UH051_Ibotyporanga_guanambi_Br22-158	UH516_Ibotyporanga_amosae_Carv82	0.199
UH068_Ibotyporanga_payaya_Br22-192	UH516_Ibotyporanga_amosae_Carv82	0.184
UH047_Ibotyporanga_naideae_Br22-153	UH516_Ibotyporanga_amosae_Carv82	0.198
UH048_Ibotyporanga_kiriri_Br22-154	UH516_Ibotyporanga_amosae_Carv82	0.207
UH095_Ibotyporanga_canudos_Br22-230	UH516_Ibotyporanga_amosae_Carv82	0.192
UH064_Ibotyporanga_emekori_Br22-183	UH516_Ibotyporanga_amosae_Carv82	0.192
UH091_Ibotyporanga_diroa_Br22-225	UH516_Ibotyporanga_amosae_Carv82	0.187
UH093_Ibotyporanga_diroa_Br22-227	UH516_Ibotyporanga_amosae_Carv82	0.205
UH074_Ibotyporanga_guanambi?_Br22-198	UH516_Ibotyporanga_amosae_Carv82	0.178
UH078_Ibotyporanga_canudos_Br22-203	UH516_Ibotyporanga_amosae_Carv82	0.194
UH079_Ibotyporanga_tuxa_Br22-204	UH516_Ibotyporanga_amosae_Carv82	0.201
UH083_Ibotyporanga_itajubaquara_Br22-212	UH516_Ibotyporanga_amosae_Carv82	0.211
UH086_Ibotyporanga_itajubaquara_Br22-216	UH516_Ibotyporanga_amosae_Carv82	0.220
UH177_Ibotyporanga_sertao_Carv60	UH516_Ibotyporanga_amosae_Carv82	0.219
UH179_Ibotyporanga_sertao_Carv74	UH516_Ibotyporanga_amosae_Carv82	0.224
UH097_Ibotyporanga_naideae_Br22-236	UH516_Ibotyporanga_amosae_Carv82	0.200
UH098_Ibotyporanga_canudos_Br22-239	UH516_Ibotyporanga_amosae_Carv82	0.213
UH302_Ibotyporanga_walekeru_Col308	UH516_Ibotyporanga_amosae_Carv82	0.200
UH290_Ibotyporanga_walekeru?_Col292	UH516_Ibotyporanga_amosae_Carv82	0.214
UH473_Ibotyporanga_ziruma_Col273	UH516_Ibotyporanga_amosae_Carv82	0.204
UH471_Ibotyporanga_bariro_Ven20-141	UH516_Ibotyporanga_amosae_Carv82	0.255
UH515_Ibotyporanga_sertao_Carv72	UH516_Ibotyporanga_amosae_Carv82	0.216
UH499_Ibotyporanga_emekori_Br22-224	UH516_Ibotyporanga_amosae_Carv82	0.169
UH498_Ibotyporanga_xique_Br22-220	UH516_Ibotyporanga_amosae_Carv82	0.190
UH553_Ibotyporanga_piojo_Col316	UH516_Ibotyporanga_amosae_Carv82	0.223
UH484_Ibotyporanga_imale?_Br22-160	UH516_Ibotyporanga_amosae_Carv82	0.162
UH508_Ibotyporanga_sertao_Br22-253	UH516_Ibotyporanga_amosae_Carv82	0.218
UH506_Ibotyporanga_sertao_Br22-246	UH516_Ibotyporanga_amosae_Carv82	0.213
S326_Artema_doriae_Isr40	UH480_Ibotyporanga_itatim_Br22-148	0.208
N051_Pholcophora_americana_G090	UH480_Ibotyporanga_itatim_Br22-148	0.228
N059_Tolteca_huahua_Mex229	UH480_Ibotyporanga_itatim_Br22-148	0.200
UH345_Papiamenta_levii_Cur44	UH480_Ibotyporanga_itatim_Br22-148	0.202
S443_Ibotyporanga_kanoe_Br16-303	UH480_Ibotyporanga_itatim_Br22-148	0.181
JA123_Ibotyporanga_naideae_G117	UH480_Ibotyporanga_itatim_Br22-148	0.192
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH480_Ibotyporanga_itatim_Br22-148	0.211
N086_Ibotyporanga_Ven18-182_Ven18-182	UH480_Ibotyporanga_itatim_Br22-148	0.202
N088_Ibotyporanga_bariro_Ven20-141	UH480_Ibotyporanga_itatim_Br22-148	0.223
UH054_Ibotyporanga_imale?_Br22-162	UH480_Ibotyporanga_itatim_Br22-148	0.189
UH061_Ibotyporanga_imale_Br22-180	UH480_Ibotyporanga_itatim_Br22-148	0.225
UH082_Ibotyporanga_canudos_Br22-208	UH480_Ibotyporanga_itatim_Br22-148	0.197

Species 1	Species 2	Distance
UH056_Ibotyporanga_imale?_Br22-168	UH480_Ibotyporanga_itatim_Br22-148	0.193
UH069_Ibotyporanga_payaya_Br22-193	UH480_Ibotyporanga_itatim_Br22-148	0.200
UH051_Ibotyporanga_guanambi_Br22-158	UH480_Ibotyporanga_itatim_Br22-148	0.162
UH068_Ibotyporanga_payaya_Br22-192	UH480_Ibotyporanga_itatim_Br22-148	0.202
UH047_Ibotyporanga_naideae_Br22-153	UH480_Ibotyporanga_itatim_Br22-148	0.193
UH048_Ibotyporanga_kiriri_Br22-154	UH480_Ibotyporanga_itatim_Br22-148	0.215
UH095_Ibotyporanga_canudos_Br22-230	UH480_Ibotyporanga_itatim_Br22-148	0.205
UH064_Ibotyporanga_emekori_Br22-183	UH480_Ibotyporanga_itatim_Br22-148	0.183
UH091_Ibotyporanga_diroa_Br22-225	UH480_Ibotyporanga_itatim_Br22-148	0.192
UH093_Ibotyporanga_diroa_Br22-227	UH480_Ibotyporanga_itatim_Br22-148	0.172
UH074_Ibotyporanga_guanambi?_Br22-198	UH480_Ibotyporanga_itatim_Br22-148	0.176
UH078_Ibotyporanga_canudos_Br22-203	UH480_Ibotyporanga_itatim_Br22-148	0.197
UH079_Ibotyporanga_tuxa_Br22-204	UH480_Ibotyporanga_itatim_Br22-148	0.195
UH083_Ibotyporanga_itajubaquara_Br22-212	UH480_Ibotyporanga_itatim_Br22-148	0.206
UH086_Ibotyporanga_itajubaquara_Br22-216	UH480_Ibotyporanga_itatim_Br22-148	0.207
UH177_Ibotyporanga_sertao_Carv60	UH480_Ibotyporanga_itatim_Br22-148	0.197
UH179_Ibotyporanga_sertao_Carv74	UH480_Ibotyporanga_itatim_Br22-148	0.204
UH097_Ibotyporanga_naideae_Br22-236	UH480_Ibotyporanga_itatim_Br22-148	0.195
UH098_Ibotyporanga_canudos_Br22-239	UH480_Ibotyporanga_itatim_Br22-148	0.203
UH302_Ibotyporanga_walekeru_Col308	UH480_Ibotyporanga_itatim_Br22-148	0.204
UH290_Ibotyporanga_walekeru?_Col292	UH480_Ibotyporanga_itatim_Br22-148	0.177
UH473_Ibotyporanga_ziruma_Col273	UH480_Ibotyporanga_itatim_Br22-148	0.198
UH471_Ibotyporanga_bariro_Ven20-141	UH480_Ibotyporanga_itatim_Br22-148	0.223
UH515_Ibotyporanga_sertao_Carv72	UH480_Ibotyporanga_itatim_Br22-148	0.207
UH499_Ibotyporanga_emekori_Br22-224	UH480_Ibotyporanga_itatim_Br22-148	0.177
UH498_Ibotyporanga_xique_Br22-220	UH480_Ibotyporanga_itatim_Br22-148	0.224
UH553_Ibotyporanga_piojo_Col316	UH480_Ibotyporanga_itatim_Br22-148	0.207
UH484_Ibotyporanga_imale?_Br22-160	UH480_Ibotyporanga_itatim_Br22-148	0.213
UH508_Ibotyporanga_sertao_Br22-253	UH480_Ibotyporanga_itatim_Br22-148	0.199
UH506_Ibotyporanga_sertao_Br22-246	UH480_Ibotyporanga_itatim_Br22-148	0.194
UH516_Ibotyporanga_amosae_Carv82	UH480_Ibotyporanga_itatim_Br22-148	0.201
S326_Artema_doriae_Isr40	UH552_Ibotyporanga_walekeru_Col287	0.244
N051_Pholcophora_americana_G090	UH552_Ibotyporanga_walekeru_Col287	0.264
N059_Tolteca_huahua_Mex229	UH552_Ibotyporanga_walekeru_Col287	0.242
UH345_Papiamenta_levii_Cur44	UH552_Ibotyporanga_walekeru_Col287	0.198
S443_Ibotyporanga_kanoe_Br16-303	UH552_Ibotyporanga_walekeru_Col287	0.180
JA123_Ibotyporanga_naideae_G117	UH552_Ibotyporanga_walekeru_Col287	0.204
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH552_Ibotyporanga_walekeru_Col287	0.183
N086_Ibotyporanga_Ven18-182_Ven18-182	UH552_Ibotyporanga_walekeru_Col287	0.177
N088_Ibotyporanga_bariro_Ven20-141	UH552_Ibotyporanga_walekeru_Col287	0.215
UH054_Ibotyporanga_imale?_Br22-162	UH552_Ibotyporanga_walekeru_Col287	0.240
UH061_Ibotyporanga_imale?_Br22-180	UH552_Ibotyporanga_walekeru_Col287	0.249
UH082_Ibotyporanga_canudos_Br22-208	UH552_Ibotyporanga_walekeru_Col287	0.217
UH056_Ibotyporanga_imale?_Br22-168	UH552_Ibotyporanga_walekeru_Col287	0.223
UH069_Ibotyporanga_payaya_Br22-193	UH552_Ibotyporanga_walekeru_Col287	0.198
UH051_Ibotyporanga_guanambi_Br22-158	UH552_Ibotyporanga_walekeru_Col287	0.233



Species 1	Species 2	Distance
UH068_Ibotyporanga_payaya_Br22-192	UH552_Ibotyporanga_walekeru_Col287	0.200
UH047_Ibotyporanga_naideae_Br22-153	UH552_Ibotyporanga_walekeru_Col287	0.213
UH048_Ibotyporanga_kiriri_Br22-154	UH552_Ibotyporanga_walekeru_Col287	0.204
UH095_Ibotyporanga_canudos_Br22-230	UH552_Ibotyporanga_walekeru_Col287	0.221
UH064_Ibotyporanga_emekori_Br22-183	UH552_Ibotyporanga_walekeru_Col287	0.215
UH091_Ibotyporanga_diroa_Br22-225	UH552_Ibotyporanga_walekeru_Col287	0.197
UH093_Ibotyporanga_diroa_Br22-227	UH552_Ibotyporanga_walekeru_Col287	0.199
UH074_Ibotyporanga_guanambi?_Br22-198	UH552_Ibotyporanga_walekeru_Col287	0.225
UH078_Ibotyporanga_canudos_Br22-203	UH552_Ibotyporanga_walekeru_Col287	0.222
UH079_Ibotyporanga_tuxa_Br22-204	UH552_Ibotyporanga_walekeru_Col287	0.215
UH083_Ibotyporanga_itajubaquara_Br22-212	UH552_Ibotyporanga_walekeru_Col287	0.232
UH086_Ibotyporanga_itajubaquara_Br22-216	UH552_Ibotyporanga_walekeru_Col287	0.226
UH177_Ibotyporanga_sertao_Carv60	UH552_Ibotyporanga_walekeru_Col287	0.232
UH179_Ibotyporanga_sertao_Carv74	UH552_Ibotyporanga_walekeru_Col287	0.243
UH097_Ibotyporanga_naideae_Br22-236	UH552_Ibotyporanga_walekeru_Col287	0.215
UH098_Ibotyporanga_canudos_Br22-239	UH552_Ibotyporanga_walekeru_Col287	0.238
UH302_Ibotyporanga_walekeru_Col308	UH552_Ibotyporanga_walekeru_Col287	0.110
UH290_Ibotyporanga_walekeru?_Col292	UH552_Ibotyporanga_walekeru_Col287	0.139
UH473_Ibotyporanga_ziruma_Col273	UH552_Ibotyporanga_walekeru_Col287	0.188
UH471_Ibotyporanga_bariro_Ven20-141	UH552_Ibotyporanga_walekeru_Col287	0.215
UH515_Ibotyporanga_sertao_Carv72	UH552_Ibotyporanga_walekeru_Col287	0.236
UH499_Ibotyporanga_emekori_Br22-224	UH552_Ibotyporanga_walekeru_Col287	0.197
UH498_Ibotyporanga_xique_Br22-220	UH552_Ibotyporanga_walekeru_Col287	0.230
UH553_Ibotyporanga_piojo_Col316	UH552_Ibotyporanga_walekeru_Col287	0.183
UH484_Ibotyporanga_imale?_Br22-160	UH552_Ibotyporanga_walekeru_Col287	0.217
UH508_Ibotyporanga_sertao_Br22-253	UH552_Ibotyporanga_walekeru_Col287	0.234
UH506_Ibotyporanga_sertao_Br22-246	UH552_Ibotyporanga_walekeru_Col287	0.231
UH516_Ibotyporanga_ramosae_Carv82	UH552_Ibotyporanga_walekeru_Col287	0.183
UH480_Ibotyporanga_itatim_Br22-148	UH552_Ibotyporanga_walekeru_Col287	0.219
S326_Artema_doriae_Isr40	UH505_Ibotyporanga_camarai_Br22-243	0.224
N051_Pholcophora_americana_G090	UH505_Ibotyporanga_camarai_Br22-243	0.215
N059_Tolteca_huahua_Mex229	UH505_Ibotyporanga_camarai_Br22-243	0.201
UH345_Papiamenta_levii_Cur44	UH505_Ibotyporanga_camarai_Br22-243	0.220
S443_Ibotyporanga_kanoe_Br16-303	UH505_Ibotyporanga_camarai_Br22-243	0.183
JA123_Ibotyporanga_naideae_G117	UH505_Ibotyporanga_camarai_Br22-243	0.195
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH505_Ibotyporanga_camarai_Br22-243	0.239
N086_Ibotyporanga_Ven18-182_Ven18-182	UH505_Ibotyporanga_camarai_Br22-243	0.241
N088_Ibotyporanga_bariro_Ven20-141	UH505_Ibotyporanga_camarai_Br22-243	0.243
UH054_Ibotyporanga_imale?_Br22-162	UH505_Ibotyporanga_camarai_Br22-243	0.223
UH061_Ibotyporanga_imale_Br22-180	UH505_Ibotyporanga_camarai_Br22-243	0.233
UH082_Ibotyporanga_canudos_Br22-208	UH505_Ibotyporanga_camarai_Br22-243	0.229
UH056_Ibotyporanga_imale?_Br22-168	UH505_Ibotyporanga_camarai_Br22-243	0.228
UH069_Ibotyporanga_payaya_Br22-193	UH505_Ibotyporanga_camarai_Br22-243	0.226
UH051_Ibotyporanga_guanambi_Br22-158	UH505_Ibotyporanga_camarai_Br22-243	0.182
UH068_Ibotyporanga_payaya_Br22-192	UH505_Ibotyporanga_camarai_Br22-243	0.229
UH047_Ibotyporanga_naideae_Br22-153	UH505_Ibotyporanga_camarai_Br22-243	0.185

Species 1	Species 2	Distance
UH048_Ibotyporanga_kiriri_Br22-154	UH505_Ibotyporanga_camarai_Br22-243	0.223
UH095_Ibotyporanga_canudos_Br22-230	UH505_Ibotyporanga_camarai_Br22-243	0.229
UH064_Ibotyporanga_emekori_Br22-183	UH505_Ibotyporanga_camarai_Br22-243	0.214
UH091_Ibotyporanga_diroa_Br22-225	UH505_Ibotyporanga_camarai_Br22-243	0.175
UH093_Ibotyporanga_diroa_Br22-227	UH505_Ibotyporanga_camarai_Br22-243	0.170
UH074_Ibotyporanga_guanambi?_Br22-198	UH505_Ibotyporanga_camarai_Br22-243	0.184
UH078_Ibotyporanga_canudos_Br22-203	UH505_Ibotyporanga_camarai_Br22-243	0.234
UH079_Ibotyporanga_tuxa_Br22-204	UH505_Ibotyporanga_camarai_Br22-243	0.216
UH083_Ibotyporanga_itajubaquara_Br22-212	UH505_Ibotyporanga_camarai_Br22-243	0.213
UH086_Ibotyporanga_itajubaquara_Br22-216	UH505_Ibotyporanga_camarai_Br22-243	0.210
UH177_Ibotyporanga_sertao_Carv60	UH505_Ibotyporanga_camarai_Br22-243	0.232
UH179_Ibotyporanga_sertao_Carv74	UH505_Ibotyporanga_camarai_Br22-243	0.231
UH097_Ibotyporanga_naideae_Br22-236	UH505_Ibotyporanga_camarai_Br22-243	0.190
UH098_Ibotyporanga_canudos_Br22-239	UH505_Ibotyporanga_camarai_Br22-243	0.219
UH302_Ibotyporanga_walekeru_Col308	UH505_Ibotyporanga_camarai_Br22-243	0.227
UH290_Ibotyporanga_walekeru?_Col292	UH505_Ibotyporanga_camarai_Br22-243	0.243
UH473_Ibotyporanga_ziruma_Col273	UH505_Ibotyporanga_camarai_Br22-243	0.235
UH471_Ibotyporanga_bariro_Ven20-141	UH505_Ibotyporanga_camarai_Br22-243	0.243
UH515_Ibotyporanga_sertao_Carv72	UH505_Ibotyporanga_camarai_Br22-243	0.230
UH499_Ibotyporanga_emekori_Br22-224	UH505_Ibotyporanga_camarai_Br22-243	0.194
UH498_Ibotyporanga_xique_Br22-220	UH505_Ibotyporanga_camarai_Br22-243	0.206
UH553_Ibotyporanga_piojo_Col316	UH505_Ibotyporanga_camarai_Br22-243	0.230
UH484_Ibotyporanga_imale?_Br22-160	UH505_Ibotyporanga_camarai_Br22-243	0.239
UH508_Ibotyporanga_sertao_Br22-253	UH505_Ibotyporanga_camarai_Br22-243	0.220
UH506_Ibotyporanga_sertao_Br22-246	UH505_Ibotyporanga_camarai_Br22-243	0.222
UH516_Ibotyporanga_ramosae_Carv82	UH505_Ibotyporanga_camarai_Br22-243	0.221
UH480_Ibotyporanga_itatim_Br22-148	UH505_Ibotyporanga_camarai_Br22-243	0.182
UH552_Ibotyporanga_walekeru_Col287	UH505_Ibotyporanga_camarai_Br22-243	0.252
S326_Artema_doriae_Isr40	UH497_Ibotyporanga_ouro_Br22-209	0.234
N051_Pholcophora_americana_G090	UH497_Ibotyporanga_ouro_Br22-209	0.239
N059_Tolteca_huahua_Mex229	UH497_Ibotyporanga_ouro_Br22-209	0.208
UH345_Papiamenta_levii_Cur44	UH497_Ibotyporanga_ouro_Br22-209	0.205
S443_Ibotyporanga_kanoe_Br16-303	UH497_Ibotyporanga_ouro_Br22-209	0.174
JA123_Ibotyporanga_naideae_G117	UH497_Ibotyporanga_ouro_Br22-209	0.219
BH58_Ibotyporanga_Ven18-182_Ven18-182	UH497_Ibotyporanga_ouro_Br22-209	0.212
N086_Ibotyporanga_Ven18-182_Ven18-182	UH497_Ibotyporanga_ouro_Br22-209	0.209
N088_Ibotyporanga_bariro_Ven20-141	UH497_Ibotyporanga_ouro_Br22-209	0.231
UH054_Ibotyporanga_imale?_Br22-162	UH497_Ibotyporanga_ouro_Br22-209	0.190
UH061_Ibotyporanga_imale_Br22-180	UH497_Ibotyporanga_ouro_Br22-209	0.203
UH082_Ibotyporanga_canudos_Br22-208	UH497_Ibotyporanga_ouro_Br22-209	0.156
UH056_Ibotyporanga_imale?_Br22-168	UH497_Ibotyporanga_ouro_Br22-209	0.200
UH069_Ibotyporanga_payaya_Br22-193	UH497_Ibotyporanga_ouro_Br22-209	0.162
UH051_Ibotyporanga_guanambi_Br22-158	UH497_Ibotyporanga_ouro_Br22-209	0.189
UH068_Ibotyporanga_payaya_Br22-192	UH497_Ibotyporanga_ouro_Br22-209	0.164
UH047_Ibotyporanga_naideae_Br22-153	UH497_Ibotyporanga_ouro_Br22-209	0.192
UH048_Ibotyporanga_kiriri_Br22-154	UH497_Ibotyporanga_ouro_Br22-209	0.100

Species 1	Species 2	Distance
UH095_Ibotyporanga_canudos_Br22-230	UH497_Ibotyporanga_ouro_Br22-209	0.152
UH064_Ibotyporanga_emekori_Br22-183	UH497_Ibotyporanga_ouro_Br22-209	0.154
UH091_Ibotyporanga_diroa_Br22-225	UH497_Ibotyporanga_ouro_Br22-209	0.176
UH093_Ibotyporanga_diroa_Br22-227	UH497_Ibotyporanga_ouro_Br22-209	0.194
UH074_Ibotyporanga_guanambi?_Br22-198	UH497_Ibotyporanga_ouro_Br22-209	0.197
UH078_Ibotyporanga_canudos_Br22-203	UH497_Ibotyporanga_ouro_Br22-209	0.152
UH079_Ibotyporanga_tuxa_Br22-204	UH497_Ibotyporanga_ouro_Br22-209	0.139
UH083_Ibotyporanga_itajubaquara_Br22-212	UH497_Ibotyporanga_ouro_Br22-209	0.148
UH086_Ibotyporanga_itajubaquara_Br22-216	UH497_Ibotyporanga_ouro_Br22-209	0.161
UH177_Ibotyporanga_sertao_Carv60	UH497_Ibotyporanga_ouro_Br22-209	0.177
UH179_Ibotyporanga_sertao_Carv74	UH497_Ibotyporanga_ouro_Br22-209	0.173
UH097_Ibotyporanga_naideae_Br22-236	UH497_Ibotyporanga_ouro_Br22-209	0.198
UH098_Ibotyporanga_canudos_Br22-239	UH497_Ibotyporanga_ouro_Br22-209	0.158
UH302_Ibotyporanga_walekeru_Col308	UH497_Ibotyporanga_ouro_Br22-209	0.195
UH290_Ibotyporanga_walekeru?_Col292	UH497_Ibotyporanga_ouro_Br22-209	0.187
UH473_Ibotyporanga_ziruma_Col273	UH497_Ibotyporanga_ouro_Br22-209	0.206
UH471_Ibotyporanga_bariro_Ven20-141	UH497_Ibotyporanga_ouro_Br22-209	0.231
UH515_Ibotyporanga_sertao_Carv72	UH497_Ibotyporanga_ouro_Br22-209	0.168
UH499_Ibotyporanga_emekori_Br22-224	UH497_Ibotyporanga_ouro_Br22-209	0.137
UH498_Ibotyporanga_xique_Br22-220	UH497_Ibotyporanga_ouro_Br22-209	0.206
UH553_Ibotyporanga_piojo_Col316	UH497_Ibotyporanga_ouro_Br22-209	0.211
UH484_Ibotyporanga_imale?_Br22-160	UH497_Ibotyporanga_ouro_Br22-209	0.216
UH508_Ibotyporanga_sertao_Br22-253	UH497_Ibotyporanga_ouro_Br22-209	0.173
UH506_Ibotyporanga_sertao_Br22-246	UH497_Ibotyporanga_ouro_Br22-209	0.173
UH516_Ibotyporanga_amosae_Carv82	UH497_Ibotyporanga_ouro_Br22-209	0.165
UH480_Ibotyporanga_itatim_Br22-148	UH497_Ibotyporanga_ouro_Br22-209	0.190
UH552_Ibotyporanga_walekeru_Col287	UH497_Ibotyporanga_ouro_Br22-209	0.178
UH505_Ibotyporanga_camarai_Br22-243	UH497_Ibotyporanga_ouro_Br22-209	0.210

**Table S2.** Distance from access routes, extent of occurrence, and number of points of occurrence

Mean distance from access routes (in km), estimated extent of occurrence (EOO; in km<sup>2</sup>) and number of points of occurrence for each *Ibotyporanga* species. Note: the EOO was objectively calculated as a convex hull of the points of occurrences for each species with at least 3 points of occurrence, with the exception of *I. kanoë* (see ‘Natural history’ section of this species).

Species	Mean distance from access routes	EOO (km <sup>2</sup> )	Number of points
<i>I. bariro</i>	0.057	-	1
<i>I. kanoë</i>	1.152	0.13	2
<i>I. camarai</i>	0.239	-	1
<i>I. sertao</i>	0.425	176020.00	27
<i>I. guanambi</i>	0.249	9571.74	6
<i>I. Br22-182</i>	1.210	-	1
<i>I. itatim</i>	0.043	-	1
<i>I. imale</i>	0.307	33459.80	10
<i>I. payaya</i>	0.080	-	2
<i>I. atikum</i>	0.015	-	1
<i>I. kiriri</i>	0.384	2405.27	3
<i>I. canudos</i>	0.188	14127.60	9
<i>I. tuxa</i>	0.545	3987.18	4
<i>I. ouro</i>	0.016	-	1
<i>I. itajubaquara</i>	0.031	-	2
<i>I. xique</i>	0.150	-	1
<i>I. xakriaba</i>	2.358	11326.40	7
<i>I. capivara</i>	0.615	-	2
<i>I. ziruma</i>	0.009	-	1
<i>I. walekeru</i>	0.084	2562.28	3
<i>I. piojo</i>	1.039	-	1
<i>I. diroa</i>	0.326	1.70	4
<i>I. emekori</i>	0.651	29245.90	9
<i>I. naideae</i>	5.771	4955630.00	57
<i>I. ramosae</i>	0.186	-	2
<i>I. Ven18-182</i>	0.820	-	1

**Table S3.** Summary of principal components analysis for comparing the environmental niche Significant principal components (PC) for the environmental layers used to ordinate the points of occurrences of *Ibotyporanga* representatives (except *I. naideae*) in Brazil, Colombia and Venezuela, based on their environmental niche. The significant PCs (1-4) are those in which the proportion of variance is higher than expected by chance (i.e., for 22 variables, those that explain at least 4.54%).

Parameter	PC1	PC2	PC3	PC4	PC5	PC6
Standard deviation	2.89	2.23	1.79	1.34	1.10	0.99
Proportion of variance	37.99%	22.51%	14.54%	8.18%	5.53%	4.43%
Cumulative proportion	37.99%	60.50%	75.04%	83.21%	88.74%	93.18%

**Table S4.** Covariance between principal components and environmental layers

Eigenvectors of covariance factor of the principal components (PC) for the environmental layers used to ordinate the points of occurrences of *Ibotyporanga* representatives (except *I. naideae*) in Brazil, Colombia and Venezuela, based on their environmental niche. The significant PCs (1-4) are those in which the proportion of variance is higher than expected by chance (i.e., for 22 variables, those that explain at least 4.54%). Variables are sorted in order of importance to the first PC axis.

Variables	PC1	PC2	PC3	PC4	PC5
Mean temperature of coldest quarter	0.34	-0.06	-0.04	-0.08	-0.09
Mean temperature of driest quarter	0.34	-0.04	-0.09	-0.01	-0.04
Annual mean temperature	0.33	-0.10	-0.07	-0.04	-0.13
Mean temperature of warmest quarter	0.32	-0.11	-0.09	0.06	-0.17
Min temperature of coldest month	0.31	0.02	-0.23	-0.07	-0.05
Mean temperature of wettest quarter	0.30	-0.14	-0.08	-0.07	-0.22
Max temperature of warmest month	0.30	-0.17	0.09	0.10	-0.15
Precipitation of wettest month	0.23	0.24	0.20	0.17	0.22
Precipitation of wettest quarter	0.21	0.25	0.25	0.18	0.17
Annual precipitation	0.19	0.32	0.24	0.07	0.01
Precipitation of coldest quarter	0.17	0.18	-0.12	0.30	0.41
Aridity	0.13	0.34	0.26	0.06	-0.07
Precipitation seasonality	0.12	-0.27	0.22	0.17	0.38
Isothermality	0.09	-0.05	-0.12	-0.55	0.37
Canopy height	0.07	0.22	0.28	-0.27	-0.32
Mean diurnal range	-0.03	-0.25	0.37	-0.03	0.05
Precipitation of driest quarter	-0.05	0.39	-0.21	0.01	-0.09
Temperature annual range	-0.06	-0.22	0.41	0.19	-0.11
Tree density	-0.08	0.03	0.21	-0.31	0.28
Precipitation of driest month	-0.09	0.36	-0.24	0.08	0.03
Precipitation of warmest quarter	-0.14	0.19	0.25	-0.19	-0.32
Temperature seasonality	-0.20	-0.11	-0.13	0.48	-0.18

**Table S5.** Summary of principal components analysis for species distribution modeling

Significant principal components (PC) for the ordination of the points of occurrences of *Ibotyporanga* in the study area, based on the environmental predictors, used for the species distribution modeling with MaxEnt. The significant PCs (1-4) are those in which the proportion of variance is higher than expected by chance (i.e., for 22 variables, those that explain at least 4.54%).

Parameter	PC1	PC2	PC3	PC4	PC5
Standard deviation	3.41	2.05	1.28	1.20	0.97
Proportion of variance	52.84%	19.08%	7.44%	6.59%	4.29%
Cumulative proportion	52.84%	71.93%	79.37%	85.96%	90.25%

**Table S6.** Correlation coefficients between principal components and environmental layers

Pearson correlation coefficients between the principal components (PC) and the environmental layers used as predictors for the species distribution modeling with MaxEnt for *Ibotyporanga* representatives. The used PCs (1-4) are those in which the proportion of variance is higher than expected by chance (i.e., for 22 variables, those that explain at least 4.54%; see Table S5). Variables are sorted in order of importance for the second principal component, as it was the most important for the distribution modeling (see Table S7).

Variables	PC1	PC2	PC3	PC4
Mean temperature of driest quarter	0.70	0.56	0.19	-0.23
Min temperature of coldest month	0.66	0.56	0.19	-0.26
Precipitation of wettest month	0.60	0.48	-0.44	-0.05
Aridity	0.82	0.46	0.21	0.17
Mean temperature of warmest quarter	0.34	0.42	0.69	0.00
Temperature seasonality	0.87	0.35	0.20	0.26
Canopy height	0.64	0.30	0.02	-0.14
Mean temperature of coldest quarter	0.71	0.21	-0.25	0.26
Mean temperature of wettest quarter	0.79	0.16	0.14	0.55
Max temperature of warmest month	0.78	0.15	0.11	0.56
Tree density	0.39	0.13	0.16	-0.41
Annual precipitation	-0.77	-0.02	0.33	0.25
Precipitation of driest quarter	-0.81	-0.19	0.45	0.18
Precipitation of driest month	-0.70	-0.20	0.46	-0.17
Temperature annual range	-0.67	-0.36	-0.16	0.43
Precipitation of wettest quarter	0.90	-0.39	-0.15	-0.09
Isothermality	0.86	-0.49	-0.03	-0.01
Precipitation of coldest quarter	0.86	-0.50	-0.08	-0.02
Annual mean temperature	0.80	-0.59	0.08	-0.05
Precipitation of warmest quarter	0.71	-0.65	0.21	-0.13
Mean diurnal range	0.72	-0.66	0.14	-0.09
Precipitation seasonality	0.62	-0.74	0.19	0.03



**Table S7.** Contribution of principal components to species distribution modeling

Contribution of the principal components described in Table S6 to the species distribution modeling with MaxEnt, without applying a threshold rule, with 1000 maximum interactions, random test percentage of 25%, raw output formatted, with 25 bootstrap replicates, and by choosing to remove duplicates from the same gridcell. The average training AUC for the replicate runs is 0.945, and the standard deviation is 0.010.

Variable	Percent contribution	Permutation importance
PC2	36.4	5.4
PC1	31.8	46.8
PC3	27.2	45.9
PC4	4.6	1.9

**Table S8.** Summary of principal components analysis for computing the phylogenetic signal for environmental niche

Significant principal components (PC) for the environmental layers used to compute the phylogenetic signal for the environmental niche of *Ibotyporanga* species from Brazil, Colombia and Venezuela in the phylogenetic analyses. The used PCs (1-4) are those in which the proportion of variance is higher than expected by chance (i.e., for 22 variables, those that explain at least 4.54%).

Parameter	PC1	PC2	PC3	PC4	PC5	PC6
Standard deviation	2.87	2.26	2.05	1.19	1.03	0.85
Proportion of variance	37.37%	23.17%	19.10%	6.46%	4.83%	3.32%
Cumulative proportion	37.37%	60.54%	79.64%	86.10%	90.93%	94.25%

**Table S9.** Covariance of principal components and environmental layers used to compute phylogenetic signal

Eigenvectors of covariance factor of the principal components (PC) for the environmental layers used to compute the phylogenetic signal for the environmental niche of *Ibotyporanga* species from Brazil, Colombia and Venezuela in the phylogenetic analyses. The used PCs (1-4) are those in which the proportion of variance is higher than expected by chance (i.e., for 22 variables, those that explain at least 4.54%). Variables are sorted in order of importance for the first principal component.

Variable	PC1	PC2	PC3	PC4	PC5
Mean temperature of driest quarter	0.34	0.09	-0.01	0.05	-0.03
Mean temperature of coldest quarter	0.34	0.10	-0.06	-0.01	0.03
Annual mean temperature	0.33	0.12	-0.03	0.08	-0.02
Min temperature of coldest month	0.33	0.05	0.13	-0.04	-0.03
Mean temperature of wettest quarter	0.32	0.11	0.02	0.15	0.04
Mean temperature of warmest quarter	0.32	0.11	0.00	0.23	-0.09
Max temperature of warmest month	0.23	0.17	-0.22	0.31	-0.13
Isothermality	0.19	0.12	-0.05	-0.42	0.47
Precipitation of coldest quarter	0.19	-0.24	0.14	0.13	-0.15
Precipitation of wettest month	0.14	-0.26	-0.30	0.06	-0.04
Annual precipitation	0.13	-0.34	-0.24	0.05	0.06
Canopy height	0.12	-0.25	-0.12	-0.25	-0.34
Precipitation of wettest quarter	0.09	-0.29	-0.33	0.08	-0.03
Precipitation of driest quarter	0.08	-0.33	0.29	0.10	-0.01
Aridity	0.06	-0.37	-0.21	0.07	0.07
Precipitation of driest month	0.01	-0.31	0.31	0.11	0.03
Tree density	-0.05	-0.07	-0.16	-0.50	-0.52
Precipitation of warmest quarter	-0.08	-0.31	-0.12	0.03	0.51
Precipitation seasonality	-0.08	0.22	-0.36	0.07	-0.02
Mean diurnal range	-0.17	0.13	-0.34	0.12	0.10
Temperature annual range	-0.22	0.06	-0.30	0.26	-0.06
Temperature seasonality	-0.25	-0.03	0.18	0.42	-0.22

**Table S10.** Summary of phylogenetic signal (Pagel's  $\lambda$ ) analyses

Phylogenetic signal (Pagel's  $\lambda$ ) analyses using the main principal components detailed in Tables S7-S8, carried out with trees estimated with IQ-TREE and Neighbor Joining (NJ), using molecular-only (CO1) or molecular and morphology data. Note: Pagel's  $\lambda$  varies from 0 (when a trait evolves independently to the phylogeny) to 1 (when a trait evolves according to Brownian motion).

Phylogenetic tree	Principal components	Fitted $\lambda$	$\lambda$ logL	$\lambda$ p-value
Molecular, IQ-TREE	PC1	0.749	-95.028	0.000
	PC2	0.614	-101.820	0.004
	PC3	0.841	-85.381	0.000
	PC4	0.026	-69.889	0.994
	PC5	0.517	-62.005	0.093
Molecular, NJ	PC1	0.795	-94.086	0.000
	PC2	0.549	-95.416	0.028
	PC3	0.840	-84.306	0.000
	PC4	0.203	-66.570	0.386
	PC5	0.535	-59.933	0.110
Morphology + Molecular, IQ-TREE	PC1	0.761	-93.936	0.000
	PC2	0.584	-99.827	0.031
	PC3	0.840	-83.656	0.000
	PC4	0.121	-69.089	0.646
	PC5	0.574	-61.163	0.045
Morphology, IQ-TREE	PC1	0.604	-51.486	0.001
	PC2	0.836	-45.665	0.007
	PC3	0.030	-44.291	0.832
	PC4	0.107	-37.704	0.607
	PC5	0.000	-32.844	1.000