**Supplemental File**

**Specimens of *Humbertium covidum* examined for the present study.**

A total of 30 specimens were examined.

Geographic origin of specimens :

SP: Saint-Pée-sur-Nivelle, Pyrénées Atlantiques, France

BI: Billère, Pyrénées Atlantiques, France

CA: Casier, Treviso, Italy.

In addition, several specimens from Billère (similar to JL343), and several specimens from Casier (similar to JL351) were shipped to Pierre Gros, photographed alive by him, then destroyed. A specimen (similar to JL351) was filmed alive *in situ* by Enrico Ruzzier.

| Specimen | Locality | Status | State | cox1 | 28S | 18S | Mitogenome | Slides |
|---|---|---|---|---|---|---|---|---|
| JL090A | SP | Voucher | Damaged (mol.) | MG655588 | | | | |
| JL090B | SP | Voucher | Destroyed | MZ561471 * | MZ520989 | MZ520996 | MZ561471 | |
| JL090C | SP | Voucher | Untouched | | | | | |
| JL090D | SP | Voucher | Untouched | | | | | |
| JL090E | SP | Voucher | Untouched | | | | | |
| JL090F | SP | Voucher | Untouched | | | | | |
| JL343 | BI | Voucher | Damaged (mol.) | MZ622153 | | | | |
| JL351A | CA | Paratype | Damaged (hist.) | | | | | 34 |
| JL351B | CA | Holotype | Damaged (hist.) | | | | | 36 |
| JL351C | CA | Paratype | Untouched | | | | | |
| JL351D | CA | Paratype | Untouched | | | | | |
| JL351E | CA | Paratype | Untouched | | | | | |
| JL351F | CA | Paratype | Untouched | | | | | |
| JL351G | CA | Paratype | Untouched | | | | | |
| JL351H | CA | Paratype | Damaged (mol.) | MZ622148 | | | | |
| JL351J | CA | Paratype | Damaged (mol.) | MZ622149 | | | | |
| JL351K | CA | Paratype | Damaged (mol.) | MZ622150 | MZ647546 | | | |
| JL351L | CA | Paratype | Damaged (mol.) | MZ622151 | MZ647547 | | | |
| JL351M | CA | Paratype | Damaged (mol.) | MZ622152 | MZ647548 | | | |
| JL351N | CA | Paratype | Destroyed | MZ561472 * | MZ520988 | MZ520995 | MZ561472 | |
| JL351P | CA | Paratype | Destroyed | | | | | |
| JL351Q | CA | Paratype | Untouched | | | | | |
| JL351R | CA | Paratype | Untouched | | | | | |
| JL351S | CA | Paratype | Untouched | | | | | |
| JL351T | CA | Paratype | Untouched | | | | | |
| JL351U | CA | Paratype | Untouched | | | | | |
| JL351V | CA | Paratype | Untouched | | | | | |
| JL351W | CA | Paratype | Untouched | | | | | |
| JL351X | CA | Paratype | Untouched | | | | | |
| JL351Y | CA | Paratype | Untouched | | | | | |

* a reminder that the *cox1* sequence is included in the corresponding mitogenome sequence

Damaged (mol.): a small part (about $1mm^3$) was taken from the specimen.

Damaged (hist.): the specimen was processed for histology.

Destroyed: the whole specimen was used for molecular analysis.

**Specimens of *Diversibipalium mayottensis* examined for the present study.**

A total of 7 specimens.

All specimens collected by Laurent Charles in Mayotte.

In addition, one photograph was received of another specimen, not collected (see Justine et al., 2018, Figure 22, photo by Benoît Duperron).

| Specimen | Locality | Status | State | cox1 | 28S | 18S | Mitogenome | Photos |
|---|---|---|---|---|---|---|---|---|
| JL282 | Ouangani | Holotype | Damaged (mol.) | MG655598 | | | | Figures 24-25 |
| JL280 | Mtsamboro | Paratype | Regenerating + damaged (mol.) | MG655596 | | | | Figures 26-27 |
| JL281A | Mtsamboro | Paratype | Highly damaged (mol.) | MG655597 § MZ561470 * | MZ520986 | MZ520997 | MZ561470 | |
| JL281B | Mtsamboro | Paratype | Damaged (mol.) | MG655597 § | | | | |
| JL281C | Mtsamboro | Paratype | Damaged (mol.) | MG655597 § | | | | |
| JL283 | Mamoudzou | Paratype | No head visible | | | | | |
| JL284 | Mtsamboro | Paratype | Damaged (mol.) | MG655599 | | | | |

* a reminder that the *cox1* sequence is included in corresponding mitogenome sequence

§ sequence MG655597: one sequence deposited in GenBank, based on 3 identical replicates from specimens JL281A, JL281B, JL281C

Damaged (mol.) : a small part (about $1mm^3$) was taken from the specimen.

Highly damaged (mol.): most of body destroyed, only head remaining.