

Supplementary Fig. S2. Alignment of partial *Fischoederius* COX1 nucleotide sequences (363 bp) from Thailand (TH), China (CH), and India (IN), Fe: *F. elongatus*, Fc: *F. cobboldi*.

Morphology and mitochondrial genome of *Fischoederius* sp. 1 (Thailand)
Pichanee Watthanasiri, Amornrat Geadkaew-Krenc, Rudi Grams*

Alignment of partial *Fischoederius* COX1 nucleotide sequences (363 bp) from Thailand (TH), China (CH), and India (IN), Fe: *F. elongatus*, Fc: *F. cobboldi*

```

                10      20      30      40      50      60
----:----|----:----|----:----|----:----|----:----|----:----|
Fischoederius_sp_1_TH TTTTGGGTCATCCTGAGGTTTATGTGCTGATTTGCCTGGCTTGGGGCTGTGAGACAT
F_cobboldi_CH         .....A.....C...T.....T.....T.....T.....T.....T.....T.....
F_elongatus_CH        .....C.....C.....T.....C.....T.....C.....T.....C.....
Fe_MN437486_TH        .....C.....C.....T.....C.....T.....C.....T.....A.....
Fe_MN437487_TH        .....C.....C.....T.....C.....T.....A.....
Fe_MN437488_TH        .....C.....C.....T.....C.....T.....A.....
Fe_JX518954_IN        .....C.....C.....T.....C.....T.....A.....
Fe_JX518953_IN        .....C.....C.....T.....C.....T.....A.....
Fe_JX518952_IN        .....C.....C.....T.....C.....T.....A.....
Fe_JQ806365_IN        .....C.....C.....T.....C.....T.....A.....
Fc_JX518951_IN        .....A.....C.....T.....G.....
Fc_JX518950_IN        .....C.....C.....T.....T.....
Fc_JQ806364_IN        .....C.....C.....T.....T.....

                70      80      90      100     110     120
----:----|----:----|----:----|----:----|----:----|----:----|
Fischoederius_sp_1_TH ATTGTATGTGTTTAAGTAATCAAGATTCGTTATTTGGTTATTATGGTATAGTGTGCT
F_cobboldi_CH         .....T.....G.....
F_elongatus_CH        .....A.....G.....
Fe_MN437486_TH        .....A.....G.....
Fe_MN437487_TH        .....G.....C.....C.....A.....C
Fe_MN437488_TH        .....A.....G.....
Fe_JX518954_IN        .....A.....G.....
Fe_JX518953_IN        .....A.....G.....
Fe_JX518952_IN        .....A.....G.....
Fe_JQ806365_IN        .....A.....G.....
Fc_JX518951_IN        .....C.....A.....G.....
Fc_JX518950_IN        .....C.....A.....G.....
Fc_JQ806364_IN        .....C.....A.....G.....

                130     140     150     160     170     180
----:----|----:----|----:----|----:----|----:----|----:----|
Fischoederius_sp_1_TH ATGGCTTCTATTGTTTGGTTGGGTAGTGTGTTGAGCTCATCATGTTTATGGTAGGG
F_cobboldi_CH         .....A.....G.....T.....T.....T.....T.....T.....
F_elongatus_CH        .....A.....A.....T.....T.....T.....T.....T.....
Fe_MN437486_TH        .....A.....A.....T.....T.....T.....T.....T.....
Fe_MN437487_TH        .....A.....A.....T.....T.....T.....T.....T.....
Fe_MN437488_TH        .....A.....A.....T.....T.....T.....T.....T.....
Fe_JX518954_IN        .....A.....A.....T.....T.....T.....T.....T.....
Fe_JX518953_IN        .....A.....A.....T.....T.....T.....T.....T.....
Fe_JX518952_IN        .....A.....A.....T.....T.....T.....T.....T.....
Fe_JQ806365_IN        .....A.....A.....T.....T.....T.....T.....T.....
Fc_JX518951_IN        .....A.....C.....G.....T.....T.....T.....
Fc_JX518950_IN        .....A.....C.....G.....T.....T.....T.....
Fc_JQ806364_IN        .....A.....C.....G.....T.....T.....T.....

                190     200     210     220     230     240
----:----|----:----|----:----|----:----|----:----|----:----|
Fischoederius_sp_1_TH CTGGATGTGAAGACATCTGTGTTTTTTAGTTCTGTGTCGATGGTATTGGTATTCCAAC
F_cobboldi_CH         T.A.....A.....A.....A.....A.....A.....A.....A.....C
F_elongatus_CH        T.A.....A.....A.....A.....A.....A.....A.....A.....C
Fe_MN437486_TH        T.....A.....A.....A.....A.....A.....A.....A.....G.....
Fe_MN437487_TH        T.....A.....C.....A.....A.....A.....A.....A.....G.....
Fe_MN437488_TH        T.....A.....C.....A.....A.....A.....A.....A.....G.....
Fe_JX518954_IN        .....A.....C.....A.....A.....A.....A.....A.....G.....
Fe_JX518953_IN        .....A.....C.....A.....A.....A.....A.....A.....G.....
Fe_JX518952_IN        .....A.....C.....A.....A.....A.....A.....A.....G.....
Fe_JQ806365_IN        .....A.....C.....A.....A.....A.....A.....A.....G.....
Fc_JX518951_IN        T.....G.....A.....A.....G.....A.....A.....A.....G.....
Fc_JX518950_IN        T.....G.....A.....A.....G.....A.....A.....A.....G.....
Fc_JQ806364_IN        T.....G.....A.....A.....G.....A.....A.....A.....G.....
```

```

                250      260      270      280      290      300
-----:-----|-----:-----|-----:-----|-----:-----|-----:-----
Fischoederius_sp_1_TH GGGATTAAGGTGTTTTCTTGATGTATATGTTAAGTGGTGTGGGTGTTTCGTGCTTGAGA
F_cobboldi_CH          .....
F_elongatus_CH         ..A.....G.....
Fe_MN437486_TH         .....A.....C..G..
Fe_MN437487_TH         ..T.....G.....A.....
Fe_MN437488_TH         .....A.....C..G..
Fe_JX518954_IN         .....
Fe_JX518953_IN         .....
Fe_JX518952_IN         .....
Fe_JQ806365_IN         .....
Fc_JX518951_IN         .....A.....G.....G..C.....T..A.....
Fc_JX518950_IN         .....A.....G.....G..C.....T..A.....
Fc_JQ806364_IN         .....A.....G.....G..C.....T..A.....

```

```

                310      320      330      340      350      360
-----:-----|-----:-----|-----:-----|-----:-----|-----:-----
Fischoederius_sp_1_TH CCTGTAGTGTGATGAATTATGGGTTTTATTTTGTTCACATGGGTGGTGAACGG
F_cobboldi_CH          .....G.....T.....
F_elongatus_CH         .....T.....
Fe_MN437486_TH         ....G.....G.....T.....
Fe_MN437487_TH         .....G.....C..G.....
Fe_MN437488_TH         ....G.....C.....G.....
Fe_JX518954_IN         .....
Fe_JX518953_IN         .....
Fe_JX518952_IN         .....
Fe_JQ806365_IN         .....
Fc_JX518951_IN         ..C..T..A.....A.....G..G.....
Fc_JX518950_IN         ..C..T..A.....A.....G..G.....
Fc_JQ806364_IN         ..C..T..A.....A.....G..G.....

```

```

---
Fischoederius_sp_1_TH ATA
F_cobboldi_CH          ...
F_elongatus_CH         ...
Fe_MN437486_TH         ...
Fe_MN437487_TH         ..T
Fe_MN437488_TH         ...
Fe_JX518954_IN         ...
Fe_JX518953_IN         ...
Fe_JX518952_IN         ...
Fe_JQ806365_IN         ...
Fc_JX518951_IN         ...
Fc_JX518950_IN         ...
Fc_JQ806364_IN         ...

```

Percent identity to *Fischoederius_sp_1_TH*

```

F_cobboldi_CH          95.3%
F_elongatus_CH         95.3%
Fe_MN437486_TH         93.9%
Fe_MN437487_TH         93.9%
Fe_MN437488_TH         94.5%
Fe_JX518954_IN         100.0%
Fe_JX518953_IN         100.0%
Fe_JX518952_IN         100.0%
Fe_JQ806365_IN         100.0%
Fc_JX518951_IN         91.7%
Fc_JX518950_IN         92.3%
Fc_JQ806364_IN         92.3%

```