SUPPLEMENTARY MATERIAL

Is *Nematocharax* (Actinopterygii, Characiformes) a monotypic fish genus?

Table S1. Results of the Generalized Mixed Yule Coalescent (GMYC) and Bayesian implementation of the PTP (bPTP) methods applied to the cytochrome c oxidase subunit I (COI) sequences of *Nematocharax venustus* to infer putative species boundaries.

**GMYC species delimitation results**

<table>
<thead>
<tr>
<th>Method</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood of null model</td>
<td>113.3837</td>
</tr>
<tr>
<td>Maximum likelihood of GMYC model</td>
<td>116.005</td>
</tr>
<tr>
<td>Likelihood ratio</td>
<td>5.242621</td>
</tr>
<tr>
<td>Result of LR test</td>
<td>0.07270751 n.s.</td>
</tr>
<tr>
<td>Number of ML clusters</td>
<td>5</td>
</tr>
<tr>
<td>Confidence interval</td>
<td>5-8</td>
</tr>
<tr>
<td>Number of ML entities</td>
<td>5</td>
</tr>
<tr>
<td>Confidence interval</td>
<td>5-14</td>
</tr>
<tr>
<td>Threshold time</td>
<td>-0.004615712</td>
</tr>
</tbody>
</table>

**bPTP species delimitation results**

| Acceptance rate                  | 0.3861     |
| Merge                             | 49926      |
| Split                            | 50074      |
| Estimated number of species       | 3-12       |
| Mean                             | 6.72       |
Figure S1. Trees resulting from the application of the Generalized Mixed Yule Coalescent (GMYC) (A) and Bayesian implementation of the PTP (bPTP) (B) methods to the cytochrome c oxidase subunit I (COI) sequences of *Nematocharax venustus*. In the GMYC tree, clusters identified as independently evolving units (i.e., potential species) are indicated in red. In the highest Bayesian supported solution of bPTP, high posterior probability values (>0.70) indicate support for a unique operational taxonomic unit (OTU) at that node.