

**Additional file 10. Indicator OTUs for sample types at each sampling time.** IndVal index is calculated as the product of specificity (A) and fidelity (B) values ranging between 0 and 1 (1 indicates the taxon exclusively occurs in the given group).

| Day            | Sample Type                     | A    | B    | p.adj | Phylum                  | Class                      | Order                    | Family                    | Genus                  |
|----------------|---------------------------------|------|------|-------|-------------------------|----------------------------|--------------------------|---------------------------|------------------------|
| <b>5-dph</b>   | Heterospecific foster juveniles | 0.37 | 1.00 | 0.024 | <i>Firmicutes</i>       | <i>Bacilli</i>             | <i>Lactobacillales</i>   | <i>Streptococcaceae</i>   | <i>Streptococcus</i>   |
|                | Heterospecific foster juveniles | 0.96 | 0.38 | 0.024 | <i>Proteobacteria</i>   | <i>Gammaproteobacteria</i> | <i>Pasteurellales</i>    | <i>Pasteurellaceae</i>    | <i>Unclassified</i>    |
|                | Heterospecific foster juveniles | 0.48 | 0.75 | 0.016 | <i>Firmicutes</i>       | <i>Bacilli</i>             | <i>Lactobacillales</i>   | <i>Streptococcaceae</i>   | <i>Streptococcus</i>   |
|                | Heterospecific foster juveniles | 0.25 | 1.00 | 0.024 | <i>Actinobacteriota</i> | <i>Actinobacteria</i>      | <i>Corynebacteriales</i> | <i>Corynebacteriaceae</i> | <i>Corynebacterium</i> |
|                | Heterospecific foster juveniles | 0.31 | 0.75 | 0.023 | <i>Acidobacteriota</i>  | <i>Blastocatellia</i>      | <i>Blastocatellales</i>  | <i>Blastocatellaceae</i>  | <i>Unclassified</i>    |
| <b>10-dph</b>  | ZF juvenile                     | 0.36 | 0.93 | 0.023 | <i>Actinobacteriota</i> | <i>Actinobacteria</i>      | <i>Corynebacteriales</i> | <i>unclassified</i>       | <i>Unclassified</i>    |
| <b>35-dph</b>  | Heterospecific foster juveniles | 0.54 | 0.88 | 0.016 | <i>Firmicutes</i>       | <i>Bacilli</i>             | <i>Paenibacillales</i>   | <i>Paenibacillaceae</i>   | <i>Paenibacillus</i>   |
|                | Heterospecific foster juveniles | 0.49 | 0.75 | 0.016 | <i>Firmicutes</i>       | <i>Bacilli</i>             | <i>Paenibacillales</i>   | <i>Paenibacillaceae</i>   | <i>Paenibacillus</i>   |
| <b>100-dph</b> | BF Adults                       | 0.69 | 0.82 | 0.016 | <i>Campilobacterota</i> | <i>Campylobacteria</i>     | <i>Campylobacterales</i> | <i>Helicobacteraceae</i>  | <i>Helicobacter</i>    |
|                | BF Adults                       | 0.65 | 0.82 | 0.016 | <i>Spirochaetota</i>    | <i>Brachyspirae</i>        | <i>Brachyspirales</i>    | <i>Brachyspiraceae</i>    | <i>Brachyspira</i>     |