**Supplementary Table 3.** Glycoside hydrolase (GH) orthologous groups (OGs) detected in the metagenome assemblies. Substrate specificity (target) is noted when available.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OG** | **Bins** | **Category** | **GH Family** | **Target** |
| OG\_1244 | 1,3,9,12 | Both | 38 | Mannose |
| OG\_3154 | 3,4,6 | Both | 18 | Chitin |
| OG\_11528 | 4,6 | Epibiont  | NA |  |
| OG\_12010 | 6 | Epibiont  | 30 | Xylan |
| OG\_12197 | 6 | Epibiont  | 17 | 1,3;1,4-β-D-glucan |
| OG\_16240 | 6 | Epibiont  | 16 | β-1,4 or β-1,3 bonds in glucans and galactans |
| OG\_1918 | 4,6,12 | Epibiont  | 31 | Broad specificity |
| OG\_20631 | Other | Epibiont  | NA |  |
| OG\_2728 | 4,6 | Epibiont  | 3 | Broad specificity (monosaccharides) |
| OG\_28509 | Other | Epibiont  | NA |  |
| OG\_3117 | 5,8 | Epibiont  | 4 | Broad specificity (phosphorylated sugars) |
| OG\_31908 | Other | Epibiont  | NA |  |
| OG\_3410 | 7,8,Other | Epibiont  | NA |  |
| OG\_3693 | 5,6 | Epibiont  | 43 | Arabinose or xylose |
| OG\_3765 | 4 | Epibiont  | NA |  |
| OG\_43634 | Other | Epibiont  | NA |  |
| OG\_52433 | Other | Epibiont  | 18 | Chitin |
| OG\_53917 | Other | Epibiont  | 10 | Xylan/cellobiose |
| OG\_6351 | 6 | Epibiont  | 8 | Lichenin, xylan, glucan, chitin |
| OG\_7475 | 4,6 | Epibiont  | NA |  |
| OG\_7827 | 6 | Epibiont  | NA |  |
| OG\_8937 | 8,11 | Epibiont  | 24 | Unassigned |
| OG\_9303 | Other | Epibiont  | 88 | Double bonded carbons in sugars |
| OG\_10713 | 3 | Tricho  | 57 | Broad specificyt |
| OG\_2844 | 1,3,9 | Tricho  | 57 | Broad specificity |
| OG\_4914 | 1,2 | Tricho  | 32 | Involved in inverting sugars |