S Table 1. Mean and (standard deviation) of C and N isotopic data from gills, muscle (siphon and mantle) and wood-storing cecum of *X. dorsalis* and wood.

| Tissue or wood | δ ¹³ C | $\delta^{15} N$ | C/N |
|-----------------------|-------------------|-----------------|-----------|
| Siphon/mantle n =3 | -22 (.2) | 6.1 (0.3) | 3 (0.1) |
| Gills n =2 | -21.7 (0.1) | 4.3 (0.3) | 3.3 (0.2) |
| Cecum n =2 | -24.4 (0.4) | 5.1 (0.02) | 6.6 (1.0) |
| Wood $n = 4$ | -28.1 (0.4) | -1.3 (1.7) | 28.9 |
| W 000 II - 4 | | | (13.7) |

Supplemental table 2. Data from *Xylophaga zierenbergi* collected from Monterey Canyon at 3100 m depth after 24 month deployment except as noted.

| Wood type | n | δ ¹³ C mean (std dev) | δ ¹⁵ N mean (std dev) | C/N |
|----------------------|----|-------------------------------------|-------------------------------------|-------------|
| Ginkgo | 9 | -23.8 (1.7) | -0.72 (0.7) | 3.88 (0.2) |
| Ironwood | 3 | -22.59 (1.1) | -0.04 (0.4) | 4.2 (0.4) |
| Bark-covered Pine | 7 | -25.8 (0.95) | 1.57 (0.6) | 3.96 (0.2) |
| Spicebush | 11 | -23.8 (0.95) | -0.30 (1) | 3.8 (0.4) |
| Bark-covered Oak | 10 | -25.7 (0.6) | -0.31 (0.7) | 3.75 (0.2) |
| Fir ENDEAVOU R | 2 | -23.0 (0.18) | -0.3 (0.09) | 3.88 (0.29) |
| 2211 m deep | | | | |

S Table 3. Fecal Chimney data for *Xylophaga dorsalis* and *X. oregona*

| taxon | Tissu e δ¹³C mea n (std dev) n | Tissu e δ ¹⁵ N mean (std dev) n | Tissue C/N mean (Std dev) n | wood δ¹³C mea n (std dev) n | Wood δ ¹⁵ N mean (std dev) n | Woo d C/N mean (Std dev) n | Chimne y δ ¹³ C mean (std dev) n | Chimne y δ ¹⁵ N mean (std dev) n | Chimney C/N mean (Std dev) n |
|------------------------|---|---|---|---|--|---|---|---|--|
| Xylophag a dorsalis | -21.8 (0.03) 2 | 6.3 (0.2) 2 | 3.7 (0.11) | -28.1 (0.4) 5 | -1.3 (1.7) 4 | 28.9 (14) 4 | -26.9 (1.1) 8 | -0.5 (1.5) 8 | 29.3 (36) 8 |
| X. oregona | -22.4 (0.2) 3 | 1.5 (1.6) 3 | 4.3 (0.03) 3 | -24.3 (0.20) 3 | 0.1 (0.9) 3 | 863.9 (667) 3 | -25.5 (0.6) 5 | 0.09 (1.0) 5 | 83.4 (11) 5 |