

Fig S1. Biosynthetic origins of essential amino acids (EAA) for detritivores and herbivores. The detritivores include enchytraeids and collembolans isolated from peatland soils of northern Alaska and reared enchytraeids (from Larsen et al. 2016). The herbivores include eggs of reared hawkmoths (*Amphion floridensis*), which fed on grape leaves as a larva and nectar (sucrose solution) as an adult (from O'Brien et al. 2002). Vascular plants, bacteria and fungi (triangles) are from Larsen et al. (2013).

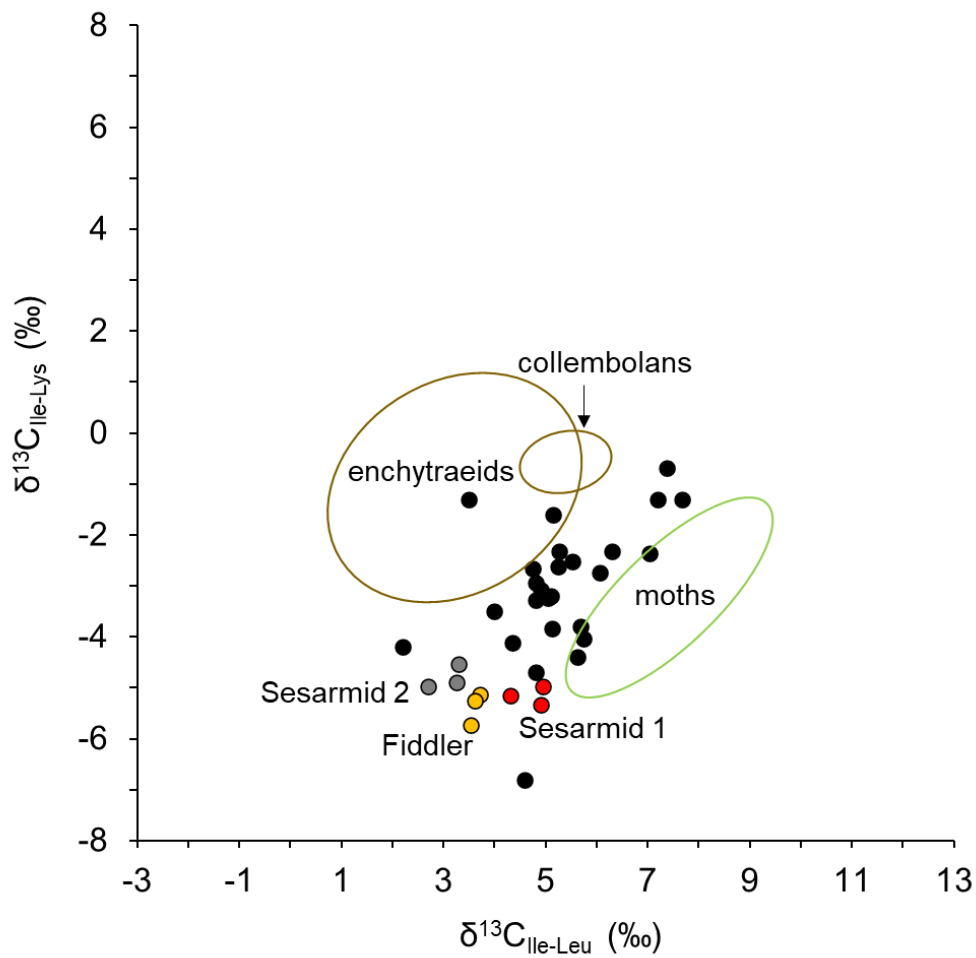


Fig S2. Comparing biosynthetic origins of essential amino acids (EAA) among mangrove consumers (black, red, orange, and grey dots), detritivores (brown circle, individual data not indicated) and herbivores (green circles, individual data not indicated). Data of mangrove consumers are from Fig 1 and data from detritivores and herbivores are from Fig S1.