



Figure S13. Orthologous genes' sex-biased pattern in different species. The Sankey diagram showing dynamic variation of SBGs across species in gut (**A**), head (**B**) and gonad (**C**). The number and percentage of different groups are marked below each diagram. The total number of single-copy ortholog is 7532 ($n = 7532$). 'Conserve MBG', 'Conserve FBG', and 'Conserve Stable' represent orthologous with simultaneous male biased, female biased, and no biased expression in the three seed beetles, respectively. 'Reversible' represents the orthologous with different sex biased expression patterns in different species.