

## Appendix E. List of fossil and living matched pairs

Table E1. List of phylogenetically matched pairs of fossil and living crustacean taxa, used for analysis presented in Table A1

Pair	Class	Order	Exemplar
1. Fossil	Malacostraca	Belotelsonidea	<i>Belotelson magister</i>
1. Living	Malacostraca	Amphionidacea	<i>Amphionides reynaudii</i>
2. Fossil	Malacostraca	Paleostomatopoda	<i>Tyrranophontes theridion</i>
2. Living	Malacostraca	Stomatopoda	<i>Alima</i>
3. Fossil	Malacostraca	Pygocephalomorpha	<i>Anthracaris gracilis</i>
3. Living	Malacostraca	Mysida	<i>Mysis relicta</i>
4. Fossil	Malacostraca	Anthracocaridacea	<i>Acadiocaris novascotica</i>
4. Living	Malacostraca	Anthracocaridacea (formerly in order Spelaeogriphacea)	<i>Spelaeogriphus lepidops</i>
5. Fossil	Malacostraca	Aeschronectida	<i>Kalidecthes richardsoni</i>
5. Living	Malacostraca	Decapoda	<i>Homarus americanus</i>
5. Living	Malacostraca	Euphausiacea	<i>Meganyctiphanes norvegica</i>
6. Fossil	Malacostraca	Paleocaridacea	<i>Acanthotelson stimpsoni</i>
6. Living	Malacostraca	Cumacea	<i>Cyclaspis bacescui</i>
6. Living	Malacostraca	Mictacea	<i>Mictocaris halope</i>
7. Fossil	?	?	<i>Martinssonina</i>
7. Fossil	?	?	<i>Skara</i>
7. Living	Maxillopoda	Mystacocaridida	<i>Derocheilocaris typicus</i>
7. Living	Maxillopoda	(multiple copepod orders)	pooled copepod value
8. Fossil	Branchiopoda	Lipostraca	<i>Lepidocaris rhyniensis</i>
8. Living	Cephalocarida	Brachypoda	<i>Hutchinsoniella macracantha</i>
9. Fossil	Malacostraca	Archeostraca	<i>Nahecaris</i>
9. Living	Malacostraca	Leptostraca	<i>Nebalia pugettensis</i>

<b>Pair</b>	<b>Class</b>	<b>Order</b>	<b>Exemplar</b>
10. Fossil	Remipedia	Enantiopoda	<i>Tesnusocaris goldlichi</i>
10. Living	Remipedia	Nectiopoda	<i>Speleonectes ondinae</i>
11. Fossil	?	?	<i>Odaraia</i>
11. Living	Branchiopoda	Diplostraca	Pooled value
12. Fossil	Branchiopoda?	?	<i>Rehbachella</i>
12. Living	Malacostraca	Bathynellacea	<i>Bathynella natans</i>

When more than one taxon is listed in either the “fossil” or “living” category, these taxa form a clade and were averaged for the analysis.