Electronic Supplementary Materials for

Exceptional preservation of comma shrimp from a mid-Cretaceous Lagerstätte of Colombia, and the origins of crown Cumacea

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Supporting Figures

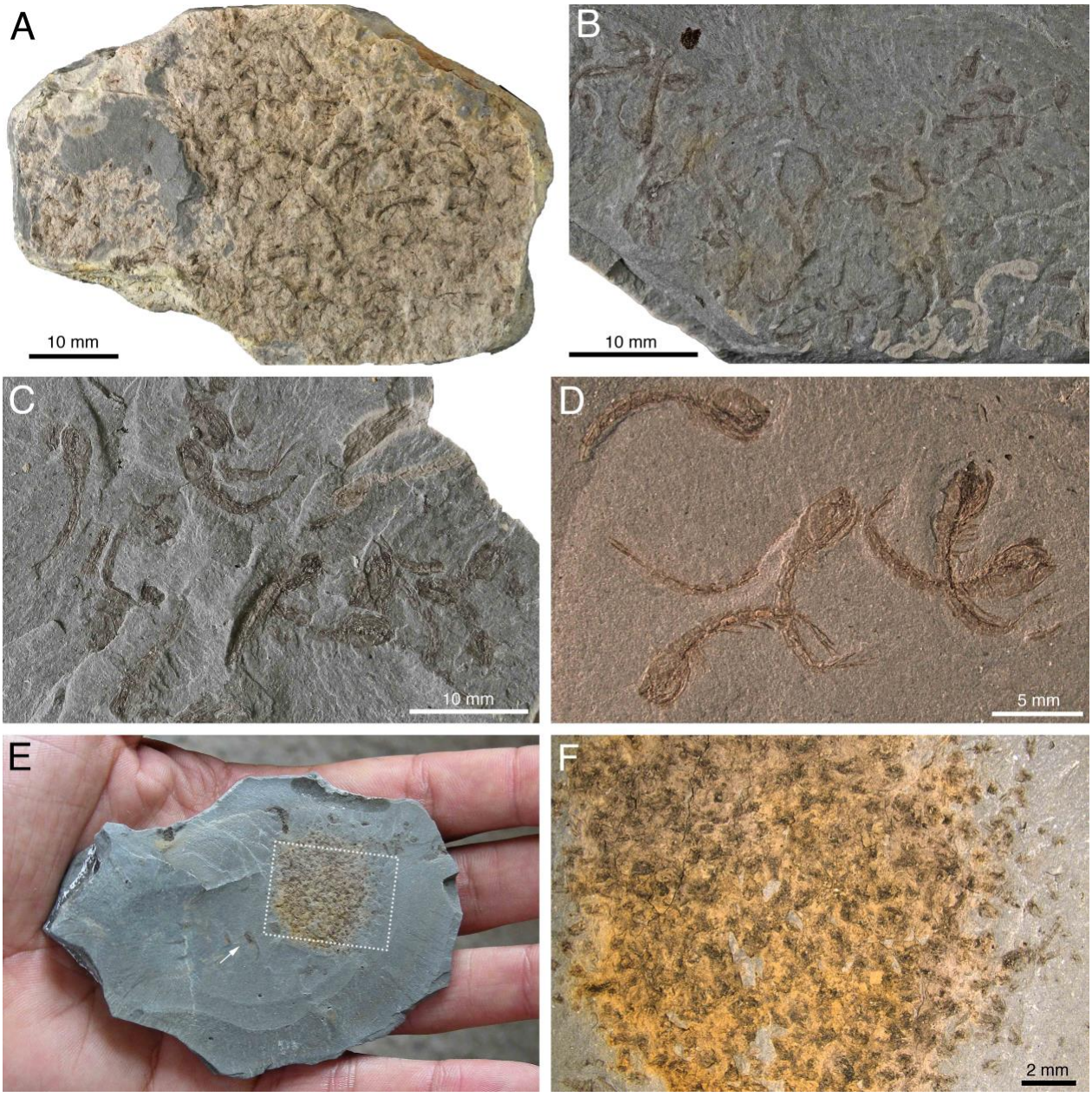

Figure S1. Mass accumulations of *Eobodotria muisca* gen. et sp. nov. from the mid-Cretaceous (Cenomanian–Turonian, 95–90 Mya) of Colombia, South America. (A) sample MGJRG.2019.I.13; brown, beige, and orange-yellow colours due to weathering. (B) sample IGM p881227, slightly weathered, showing a packing density of about 6 specimens per cm^2. (C) Sample MGJRG.2019.I.9, showing a fresh, non-weathered hand sample with well-preserved cumaceans. (D) Sample IGM p880694 with holotype and at least 4 other complete specimens. (E) Sample IGM p880691, showing an unusual pile of poorly preserved cumacean remains; white arrow points a well-preserved adult female (see Figure 1D). (F) Close-up of the pile of cumacean remains in IGM p880691 (dotted box in E).

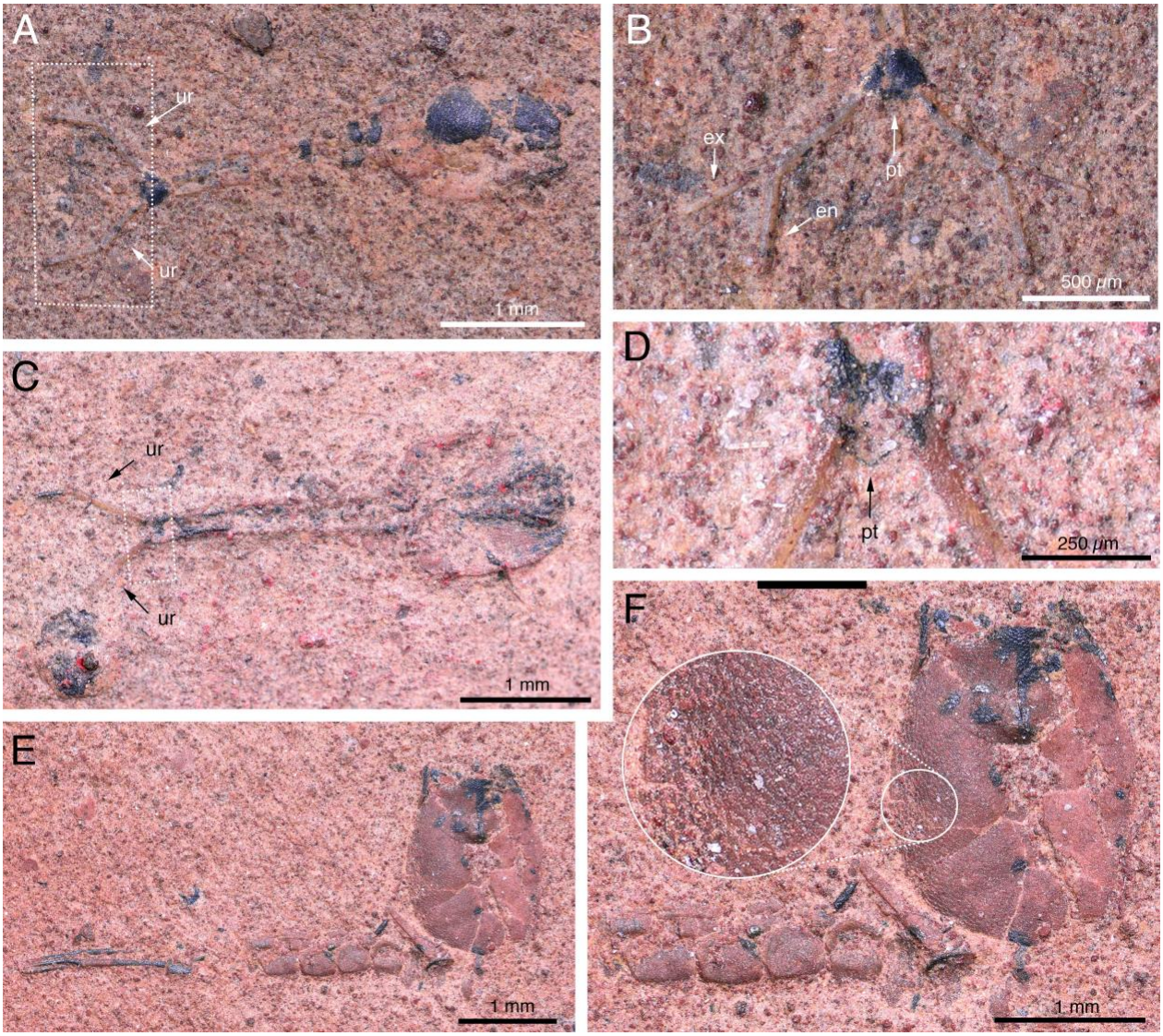

Figure S2. *Palaeocuma hessi* Bachmayer, 1960, from the Jurassic (Callovian, 165 Mya) of La Voulte-sur-Rhone, France. (A) Holotype F1282; (B) Close-up of holotype biramous uropods with long and slender exopod and endopod. (C) Paratype F2441; (D) Close-up of paratype showing the fused pleotelson. (E) Hypotype F2442; (F) Close-up of hypotype showing details of the pleonites and the ovate carapace with scaly cuticle. Photos courtesy of Loïc Costeur and Walter Etter (Natural History Museum Basel, Switzerland).

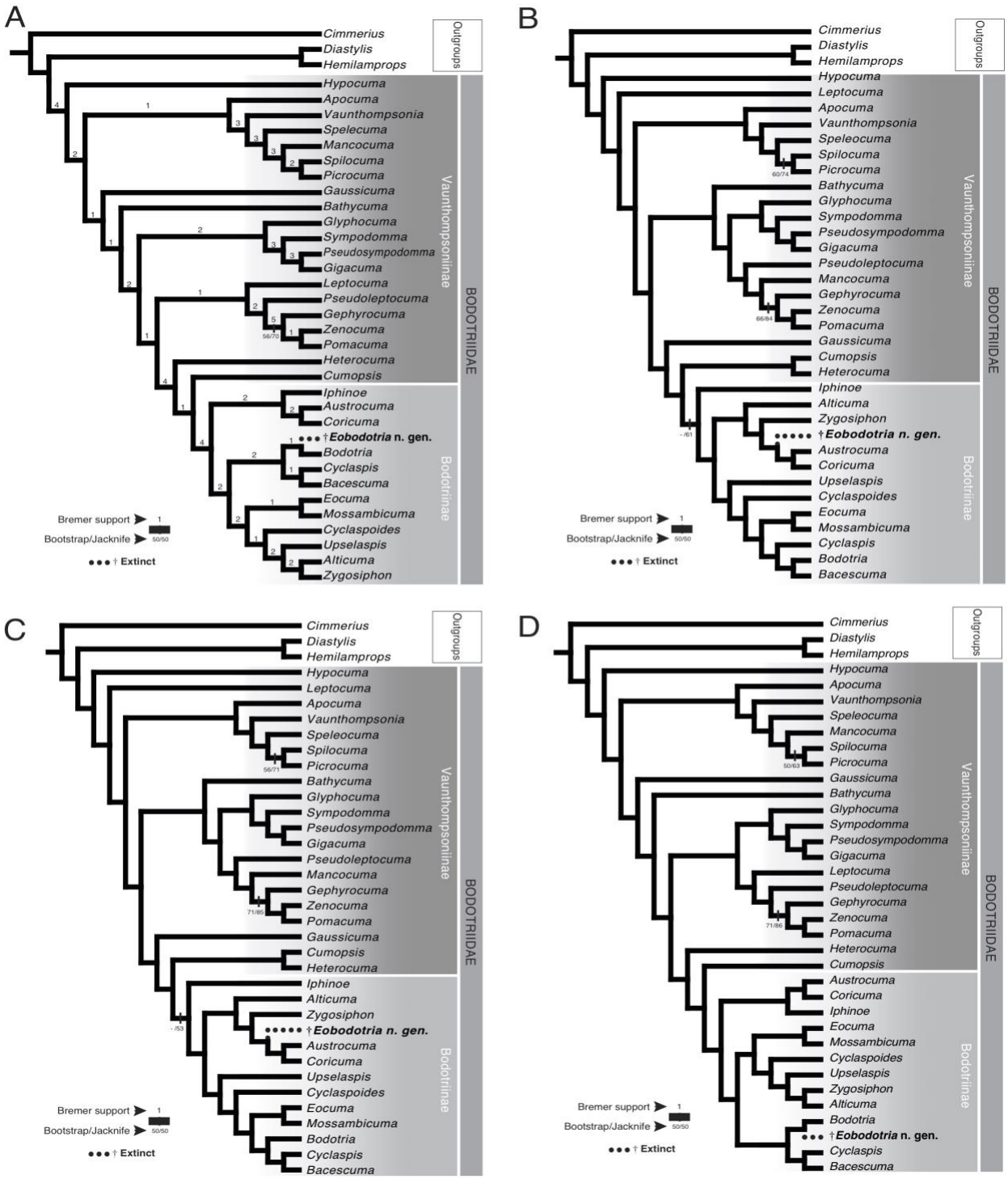

Figure S3. Results of equally-weighted and implied-weights maximum parsimony analyses. A) equally-weighted parsimony: single most parsimonious tree. (B–D) Implied-weights maximum parsimony (IWMP) topologies: (B) concavity value K=3; (C) concavity value K=6; (D) concavity value K=12. Analyses performed in TNT v.1.5.

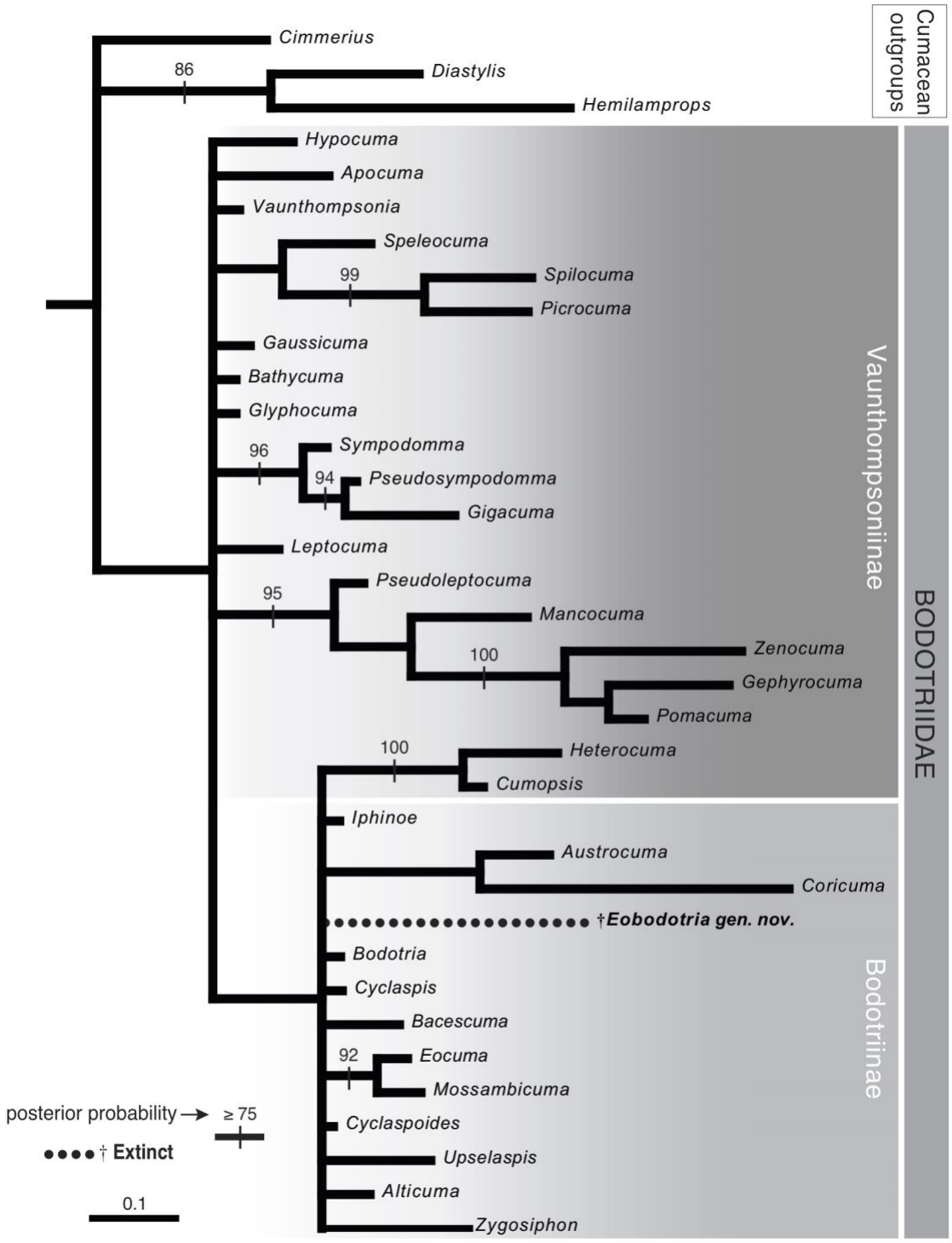

Figure S4. Bayesian majority-rule consensus topology of the post-burnin sample of trees for crown-group cumacean family Bodotriidae, including the extinct *Eobodotria muisca* gen. et sp. nov. Posterior probability support values indicated above branches. Branches with posterior probability support < 75% are collapsed.

Supporting Tables

Table S1. List of known fossil stem- and crown-group cumaceans, arranged chronologically from oldest to youngest (see also main text, figure 4*b*–*f*). Taxa marked with an asterisk (*) are putative stem-group Cumacea.

Taxon	Age	Unit	Locality
**Carbocuma imoensis* Schram et al., 2003	Upper Mississippian and Pennsylvanian	Imo Formation and Eudora Shale	Arkansas and Kansas, U.S.A.
**Ophthalmdiastylis parvulorostrum* Schram et al., 2003	Upper Mississippian and Pennsylvanian	Imo Formation and Eudora Shale	Arkansas and Kansas, U.S.A.
**Securicaris spinosus* Schram et al., 2003	Upper Mississippian	Imo Formation	Arkansas, U.S.A.
**Ophthalmdiastylis inflata* Malzahn, 1972	Permian	Marl Beds of Zechstein 1	Germany
**Ophthalmdiastylis costata* Malzahn, 1972	Permian	Marl Beds of Zechstein 1	Germany
Palaeocuma hessi Bachmayer, 1960	Callovian	La Voulte-sur-Rhône Konservat-Lagerstätte	La Voulte-sur-Rhône, France
Eobodotria muisca Luque & Gerken gen. et sp. nov.	Upper Cenomanian–lower-mid Turonian	Churuvita Group	Boyacá, Colombia