Split distribution, biogeography and morphological and genetic diversity of the Iberobathynellini Tribe in the family Parabathynellidae (Crustacea, Malacostraca, Bathynellacea)

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Supplementary material

APPENDIX S1 Localities (with UTM coordinates) of the studied samples of Bathynellacea. Voucher numbers of the samples housed in the Tissue and DNA Collection of the Museo Nacional de Ciencias Naturales, CSIC (Spain) and GenBank accession numbers of corresponding COI and /or 18S sequences are also provided. Samples included in the concatenated 18S+COI analysis are indicated in red

Order/Family/Species	Locality	Coordinates			Specimens voucher	GenBank accesion number	
		N	E	Z	MNCN/ADN	COI	18S
BATHYNELLACEA CHAPPUIS, 1915							
Parabathynellidae Noodt, 1965							
1. *Iberobathynella andalusica* Camacho, 2007	*Varas River, Adamuz to Pozo Blanco, Córdoba	38.08128	-4.63227	227	29418		KC999705
2. *I. asturiensis* Serban & Comas, 1978	*Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54896	MZ128377	MT874908
3. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54898		
4. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54899		
5. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54900		MT822874
6. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54901		
7. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54904		
8. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54905		
9. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54906		
10. *I. asturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54907		
11. *I. burgalensis* Camacho, 2005	*Ojo Guareña Cave (OG53), Sotoscueva, Burgos	43.03188	-3.65821	724	29520	HQ659859	KC469529
12. *I. burgalensis*	Ojo Guareña Cave (OG53), Sotoscueva, Burgos	43.03188	-3.65821	724	29521	HQ659860	KC999687
13. *I. burgalensis*	Ojo Guareña Cave (OG53), Sotoscueva, Burgos	43.03188	-3.65821	724	29542	HQ659861	-----
14. *I. cantabriensis* Camacho & Serban, 1998	CO276, Torco Lobos Cave, Herrerías, Cantabria	43.28755	-4.50909	492	29371	HQ659852	-----
15. *I. cantabriensis*	CO276, Torco Lobos Cave, Herrerías, Cantabria	43.28755	-4.50909	492	29372	HQ659853	KC999704
16. *I. cantabriensis*	CO276, Torco Lobos Cave, Herrerías, Cantabria	43.28755	-4.50909	492	29373	HQ659854	-----
17. *I. celiana* Camacho, 2003	Viar Stream, Castiblanco, Sevilla	37.71374	-5.87772	60	29452	HQ659862	KC469527
18. *I. cornejoensis* Camacho, 2005	*Redonda Cave, Sotoscueva, Burgos	43.03236	-3.62913	668	29946	KP974108	KP999701
19. *I. cornejoensis*	Redonda Cave, Sotoscueva, Burgos	43.03236	-3.62913	668	29949	KP974109	-----
20. *I. espaniensis* Serban & Comas, 1978	*Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54893	MZ128378	MT82875
21. *I. espaniensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54894		-----
22. *I. espaniensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54895		-----
23. *I. espaniensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54910		-----
24. *I. espaniensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54911		-----
25. *I. espaniensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54912		-----
26. *I. espaniensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54913		-----
27. *I. imuniensis* Camacho, 1987	* Torca Morteros Cave, Espinosa de los Monteros, Burgos	43.14786	-3.59539	1285	29164	HQ659849	KP999688

28. *I. imuniensis*	Torca Morteros Cave, Espinosa de los Monteros, Burgos	43.14786	-3.59539	1285	29166	HQ659850	KC469528
29. *I. imuniensis*	Torca Morteros Cave, Espinosa de los Monteros, Burgos	43.14786	-3.59539	1285	29167	HQ659851	-----
30. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29776	KC974054	-----
31. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29777	KC974055	KC999689
32. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29778	KP974056	KP999690
33. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29779	KP974057	-----
34. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29780	KP974058	-----
35. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29781	KP974059	-----
36. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29782	KP974060	-----
37. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29783	KP974061	-----
38. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29784	KP974062	-----
39. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29785	KP974063	-----
40. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29786	KP974064	-----
41. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29788	KP974065	-----
42. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29789	KP974066	-----
43. *I. imuniensis*	Bernias Cave, Espinosa de los Monteros, Burgos	43.16902	-3.64212	1227	29792	KP974067	-----
44. *I. imuniensis*	Calleja-Cueto Cave, Arredondo, Cantabria	43.29183	-3.62869	649	54926	MZ128379	MT822876
45. *I. imuniensis*	Becerral Cave, Soba, Cantabria	43.19491	-3.58453	710	54569	KP974125	-----
46. *I. imuniensis*	Lunada Cave, Espinosa de los Monteros, Burgos	43.16993	-3.64993	1285	29989	KP974113	KP999691
47. *I. imuniensis*	Lunada Cave, Espinosa de los Monteros, Burgos	43.16993	-3.64993	1285	29990	KP974114	KP999692
48. *I. imuniensis*	Lunada Cave, Espinosa de los Monteros, Burgos	43.16993	-3.64993	1285	29991	KP974115	KP999693
49. *I. imuniensis*	Lunada Cave, Espinosa de los Monteros, Burgos	43.16993	-3.64993	1285	29992	KP974116	KP999694
50. *I. imuniensis*	Lunada Cave, Espinosa de los Monteros, Burgos	43.16993	-3.64993	1285	29993	KP974117	KP999696
51. *I. imuniensis*	Lunada Cave, Espinosa de los Monteros, Burgos	43.16993	-3.64993	1285	29994	KP974118	KP999695
52. *I. imuniensis*	V142 Cave, Espinosa de los Monteros, Burgos	43.14493	-3.67693	1564	54559	KP974119	-----
53. *I. imuniensis*	V142 Cave, Espinosa de los Monteros, Burgos	43.14493	-3.67693	1564	54560	KP974120	-----
54. *I. imuniensis*	V142 Cave, Espinosa de los Monteros, Burgos	43.14493	-3.67693	1564	54561	KP974121	-----
55. *I. imuniensis*	V142 Cave, Espinosa de los Monteros, Burgos	43.14493	-3.67693	1564	54562	KP974122	-----
56. *I. imuniensis*	V142 Cave, Espinosa de los Monteros, Burgos	43.14493	-3.67693	1564	54563	KP974123	-----
57. *I. imuniensis*	V142 Cave, Espinosa de los Monteros, Burgos	43.14493	-3.67693	1564	54564	KP974124	-----
58. *I.* cf *magna*	CO262, Pelacristo Cave, Peñamellera Baja, Asturias	43.29297	-4.55001	720	29367	HQ659855	-----
59. *I.* cf *magna*	CO262, Pelacristo Cave, Peñamellera Baja, Asturias	43.29297	-4.55001	720	29368	HQ659856	-----
60. *I.* cf *magna*	CO262, Pelacristo Cave, Peñamellera Baja, Asturias	43.29297	-4.55001	720	29151	HQ659857	-----
61. *I.* cf *magna*	CO262, Pelacristo Cave, Peñamellera Baja, Asturias	43.29297	-4.55001	720	29370	HQ659858	-----
62. *I. ortizi* Camacho, 1989	*Rei Cintolo Cave, Mondoñedo, Lugo	43.39364	-7.36786	409	54616	MF443322	MF436209
63. *I. parasturiensis* Camacho & Serban, 1998	*CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29553	KC973998	-----
64. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29554	KC973999	-----
65. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29555	KC974000	-----

66. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29556	KC974001	KC999699
67. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29557	KC974002	-----
68. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29558	KC974003	-----
69. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29560	KC974004	-----
70. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29561	KP974005	KP999698
71. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29563	KC974006	-----
72. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29565	KC974007	-----
73. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29566	KC469544	KC469530
74. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29569	KC974008	-----
75. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29570	KC974009	-----
76. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29572	KC974010	-----
77. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29578	KC974011	-----
78. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29579	KC974012	-----
79. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29580	KC974013	-----
80. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29583	KC974014	KP999700
81. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29584	KC974015	-----
82. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29585	KC974016	-----
83. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29586	KC974017	-----
84. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29588	KC974018	-----
85. *I. parasturiensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29589	KC974019	-----
86. *I. parasturiensis*	CO034, Nava Cave, Lamasón, Cantabria	43.25928	-4.50022	492	29609	KC974020	-----
87. *I. parasturiensis*	CO034, Nava Cave, Lamasón, Cantabria	43.25928	-4.50022	492	29611	KC974022	-----
88. *I. parasturiensis*	CO034, Nava Cave, Lamasón, Cantabria	43.25928	-4.50022	492	29612	KC974021	KC999697
89. *I. parasturiensis*	CO034, Nava Cave, Lamasón, Cantabria	43.25928	-4.50022	492	29613	KC974023	-----
90. *I. parasturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54897		MT822878
91. *I. parasturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54902		
92. *I. parasturiensis*	Infierno Cave, Cangas de Onís, Asturias	43.28068	-4.99305	950	54903		
93. *I.* sp. - *I.* sp. nov. 1 (cryptic *1. magna*)	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29708	KP974069	KP999707
94. *I.* sp.	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29710	KP974070	------
95. *I.* sp.	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29716	KP974068	------
96. *I.* sp.	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29721	------	------
97. *I.* sp.	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	09001	HQ659863	------
98. *I.* sp.	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	09002	HQ659864	------
99. *I.* sp.	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	09003	HQ659865	------
100. *I.* sp 1 *I.* sp. nov. 2 (cryptic *I. imuniensis*)	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29709	KP974071	
101. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29713	KP974072	------
102. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29714	KP974074	------
103. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29715	KP974073	------
104. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29719	KP974076	------
105. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29720	KP974075	------
106. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29758	KP974077	------
107. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29759	KP974078	------
108. *I.* sp	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	54545		------

109. *I.* sp. 2 - *I. cantabriensis*	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29564	KP974097	KP999724
110. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29573	KC974102	KC999725
111. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29574	KC974103	------
112. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29576	KP974095	KP999726
113. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29577	KP974096	KP999718
114. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29581	KP974098	------
115. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29582	KP974099	------
116. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29592	KP974100	KP999719
117. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29652	KP974104	KP999721
118. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29653	KP974094	KP999722
119. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29654	KP974105	------
120. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29656	KP974106	------
121. *I.* sp. 2	CO209, Treslajorá Cave, Peñarrubia, Cantabria	43.26725	-4.59085	1132	29658	KP974104	KP999723
122. *I.* sp. 2 - *I. cantabriensis*	CO220, Carnero Spring Cave, Lamasón, Cantabria	43.28680	-4.47784	156	29734	KP974107	
123. *I.* sp. 2 - *I. cantabriensis*	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29755		
124. *I.* sp. 3 - *I.* sp. nov. 2 (cryptic *I. imuniensis*)	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29473	HQ659866	KC999728
125. *I.* sp. 3 - *I.* sp. nov. 2 (cryptic *I. imuniensis*)	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29704	KC974091	------
126. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29705	KC974079	KC999713
127. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29706	KC974090	------
128. *I.* sp.3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29707	KP974080	KP999712
129. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29736	KP974081	------
130. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29737	KP974082	KC999714
131. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29739	KP974083	KC999715
132. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29740	KP974084	KP999716
133. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29741	KP974085	------
134. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29742	KP974086	------
135. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29743	KP974087	------
136. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29744	KP974088	------
137. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	29745	KP974089	------
138. *I.* sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	54539		------
139. *I.* sp. or sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	54540		------
140. *I.* sp. or sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	54541		------
141. *I.* sp. or sp. 3	CO069, Pozo Agua Cave, Peñamellera Baja, Asturias	43.28383	-4.52318	374	54542		------
142. *I.* sp. 4 - *I. cantabriensis*	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29756	KP974092	------
143. *I.* sp. 4	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	29472	KP974093	KC999727
144. *I.* sp. 4	CO314, Pilar Cave, Peñamellera Baja, Asturias	43.29583	-4.53996	538	54544		
145. *I.* sp. 4 - *I. cantabriensis* (*I.* sp. 2 on Genbank)	CO089, Sorios Cave, Peñamellera Baja, Asturias	43.28376	-4.55022	869	29488	HQ659867	KP999717
146. *I.* sp. 5 - *I.* sp. nov. 3 (cryptic *I. imuniensis*)	Fonda Cave, Carranza, Vizcaya	43.27399	-3.32244	640	54658		------
147. *I.* sp. 5	Fonda Cave, Carranza, Vizcaya	43.27399	-3.32244	640	54659		------

148. *I.* sp. 5	Fonda Cave, Carranza, Vizcaya	43.27399	-3.32244	640	54660		------
149. *I.* sp. 5	Fonda Cave, Carranza, Vizcaya	43.27399	-3.32244	640	54661		------
150. *I.* sp. 5	Fonda Cave, Carranza, Vizcaya	43.27399	-3.32244	640	54662		------
151. *I.* sp. 6 - *I.* sp. nov. 3 (cryptic *I. imuniensis*)	Astui Cave, Cestona, Vizcaya	43.21756	-2.18939	131	29978	KP974110	KP999710
152. *I.* sp. 6	Astui Cave, Cestona, Vizcaya	43.21756	-2.18939	131	29979	KP974111	KP999711
153. *I.* sp. 6	Astui Cave, Cestona, Vizcaya	43.21756	-2.18939	131	29980	KP974112	KP999709
154. *I.* sp. 6 - *I.* sp. nov. 3 (cryptic *I. imuniensis*)	Mina Elvira, Galdames, Vizcaya	43.27623	-3.08539	511	29971	MZ128380	KP999708
155. *Pi* cf. *fage* (Delamare Deboutteville & Angelier, 1950)	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29665	KP974027	------
156. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29666	KP974028	KC999736
157. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29667	KP469541	KC469533
158. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29668	KP974030	------
159. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29669	KP974031	KP999737
160. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29670	KP974032	KP999738
161. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29672	KC469539	KP999735
162. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29673	KP974029	KP999739
163. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29674	KP974033	------
164. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29675	KP974034	------
165. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29676	KP974035	------
166. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29677	KP974036	------
167. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29678	KP974037	------
168. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29679	KP974038	------
169. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29680	KP974039	------
170. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29681	KP469540	KC469531
171. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29682	KP974024	KP999740
172. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29768	KP974025	------
173. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29769	KP974026	------
174. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29771	KP974040	------
175. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29774	KP974041	------
176. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	29775	KP974042	------
177. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	54548		------
178. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	54550		
179. Pi. cf. fagei	Higuera Cave, Pliego, Murcia	37.97836	-1.50170	496	54551		------
180. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54581	KP974043	KC999742
181. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54582	KP974044	KC999743
182. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54583	KP974045	KC999744
183. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54584	KP974046	KC999745
184. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54585	KP974047	KC999746
185. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54586		KC999747
186. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54587		KC999748
187. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54588		KC999749
188. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54589		KC999750
189. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54590		KC999751
190. Pi. cf. fagei	Pileta Cave, Benaoján, Málaga	36.69133	-5.26981	729	54591		

191. *Pi. maghrebensis* (Boutin & Coineau, 1987)	Well, Nador, Morocco	34.95238	-2.59795	276	29931	KC974048	------
192. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29932	KC974049	KC999734
193. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29933	KC974050	KC999732
194. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29934	KC974051	KC999733
195. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29935	KC469542	KC469532
196. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29936	KC469543	KC999729
197. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29937	KC974052	KC999730
198. *Pi. maghrebensis*	Well, Nador, Morocco	34.95238	-2.59795	276	29938	KC974053	KC999731
199. *Texanobathynella cf bowmani*	Live Oak, Crockett County, Texas	30.74220	-101.6739	655	54641	MF443324	------
200. *T. aaronswinki* Camacho & Hutchins, 2021	*Sessom Creek, Hays County, Texas	29.88996	-97.93596	177	54862	MZ128381	MT822879
201. *T. aaronswinki*	South Llano River, Kimble County, Texas	30.45342	-99.80060	520	54866		
202. *T. coloradoensis* Camacho & Hutchins, 2021	*Colorado River, Bastrop County, Texas	30.11187	-97.32775	94	54867	MZ128382	MT874910
203. *T. coloradoensis*	Colorado River, Bastrop County, Texas	30.11187	-97.32775	94	54868	MZ128383	MZ127381
204. *T. coloradoensis*	Colorado River, Bastrop County, Texas	30.11187	-97.32775	94	54869	MZ128384	MZ127382
205. *T. coloradoensis*	Colorado River, Bastrop County, Texas	30.11187	-97.32775	94	54870	MZ128382	MZ127383
206. *Montanabathynella pecosensis* Cam. & Hut., 2021	*Live Oak, Crockett County, Texas, USA	30.74220	-101.6739	655	54864	------	MT822881
207. *Parabathynella* sp. (*P.* cf *motasi*)	Poltarica spring, Slovenia	45.88681	-14.76842	272	54669	MF443326	MF436211
208. *Hexabathynella sevillaensis* Camacho, 2005	*Santiago el Grande Cave, Sevilla (OUTGROUP)	38.03013	-5.90429	358	29545	HQ659869	KC469526

APPENDIX S2 Populations of species within the Iberobathynellini tribe included in the present study (updated data from Camacho & Serban, 2000; Camacho, 2003; Camacho, 2006; Camacho et al., 2013a, b; Camacho et al., 2017; Camacho, 2019)

* Type locality; ** Locality of the specimen used in the molecular analysis; *** Specimens of the type locality used in the molecular analysis.

Species	**Habitat**	**Locality**	**Town/County**	**Province/State**	**Country**
1. *Californibathynella californica* (Schminke & Noodt, 1988)	Hyporheic	* Otay-Reservoir River	San Diego	California	USA
2. *Guadalopebathynella puchi* Camacho & Serban, 1998	Hyporheic	* Guadalope River	Mas de las Matas	Teruel	Spain
3. *Hexaiberobathynella mateusi* (Galhano, 1967)	Hyporheic	* Duero River	Near Porto		Portugal
	Hyporheic	Mondego River	Coimbra		Portugal
	Hyporheic	Cavado River	Barcelos		Portugal
	MSS	Ptº Morcuera	Guadarrama	Madrid	Spain
	Cave	Reguerillo	Patones	Madrid	Spain
	Hyporheic	Picnic Area	Talamanca del Jarama	Madrid	Spain
	Hyporheic	Bridge	Torrelaguna	Madrid	Spain
	Hyporheic	Pusa Stream	Santa Ana de Pusa	Toledo	Spain
	Hyporheic	Valdehornos Stream	Montes de Toledo	Toledo	Spain
	Hyporheic	Tajo River	Peñalen	Guadalajara	Spain
	Hyporheic	Tajo River	Zaorejas	Guadalajara	Spain
	Hyporheic	Hoz Seca Stream	Peralejo de las Truchas	Guadalajara	Spain
	Hyporheic	Sorbe Stream	----------	Guadalajara	Spain
	Hyporheic	Ucero Stream	Ucero	Soria	Spain
	Well	Berlanga de Duero	----------	Soria	Spain
	Well	FFC station	Hortezuela	Soria	Spain
	Hyporheic	Santos Stream	Sierra de Javalón	Teruel	Spain
	Hyporheic	Cinca Stream	Desfiladero de la Estada	Huesca	Spain
	Hyporheic	Mijares Stream	Montanejos	Castellón	Spain
	Hyporheic	Fardes Stream	Lanteira	Granada	Spain
	Spring	El Baillo	Quesada	Jaén	Spain
	Well	La Isla	Arganda del Rey	Madrid	Spain
	Hyporheic	Tajuña Stream	Luzón	Guadalajara	Spain
	Hyporheic	Tajuña Stream	Abanades	Guadalajara	Spain
	Hyporheic	Tajuña Stream	Loranca	Guadalajara	Spain
4. *Hi. hortezuelensis* Camacho & Serban, 1998	Well	*FFC station	Hortezuela	Soria	Spain

5. *Iberobathynella* (*E.*) *andalusica* Camacho, 2007	Hyporheic	***Varas River	Adamuz	Córdoba	Spain
	Well	Fuentes de Andalucia		Sevilla	Spain
6. *I.* (*A.*) *asturiensis* Serban & Comas, 1978	Cave	*** Infierno	Covadonga	Asturias	Spain
	Cave	CO044, Tresavarillas	Ptº de las Llaves	Cantabria	Spain
	Cave	Pruneda	Bobia de Abajo	Asturias	Spain
	Cave	Menor	Bermiego	Asturias	Spain
	Cave	Valporquero	Valporquero de Torio	León	Spain
7. *I.* (*I.*) *barcelensis* (Galhano, 1970)	Hyporheic	* Cavado Stream	Barcelos		Portugal
8. *I.* (*E.*) *burgalensis* Camacho, 2005	Cave	*** Ojo Guareña (OG53)	Cornejo	Burgos	Spain
9. *I.* (*E.*) *cantabriensis* Camacho & Serban, 1998	Cave	* CO099, Calderón	Venta Fresnedo	Cantabria	Spain
	Cave	CO121, Las Torcas	Venta Fresnedo	Cantabria	Spain
	Cave	CO170, Cabaña Indiano	Cades	Asturias	Spain
	Cave	CO180, Los Sotombos	Venta Fresnedo	Cantabria	Spain
	Cave	** CO276, Lobos	Herrerias	Cantabria	Spain
I. sp. 2 – *I. cantabriensis*	Cave	** CO209, Treslajorá	Peñarrubia	Cantabria	Spain
I. sp. 2 – *I. cantabriensis*	Spring	** CO220, Carnero	Peñarrubia	Cantabria	Spain
I. sp. 2 – *I. cantabriensis*	Cave	** CO314, Pilar	Peñamellera	Asturias	Spain
10. *I.* (*A.*) *cavadoensis* (Noodt & Galhano, 1969)	Hyporheic	* Cavado Stream	Barcelos		Portugal
	Hyporheic	Tributary of Esla Stream	Vegacerneja	León	Spain
	Hyporheic	Carballa-Tamuxo Stream	Near la Guardia	Pontevedra	Spain
11. *I.* (*A.*) *celiana* Camacho, 2003	Hyporheic	* Torrecilla Stream	Lora del Río	Sevilla	Spain
	Hyporheic	** Viar Stream	Castiblanco	Sevilla	Spain
12. *I.* (*A.*) *cornejoensis* Camacho, 2005	Hyporheic	* Trema Stream	Cornejo	Burgos	Spain
	Cave	** Redonda	Cornejo	Burgos	Spain
	Cave	La Mina	Cornejo	Burgos	Spain
13. *I.* (*E.*) *espaniensis* Serban & Comas, 1978	Cave	*** Infierno	Covadonga	Asturias	Spain
	Cave	CO262, Pelacristo	Merodio	Asturias	Spain
	Cave	CO150, Grañaja	Suarias	Asturias	Spain
	Hyporheic	Tajuña Stream	Masegoso	Guadalajara	Spain

	Hyporheic	Tajuña Stream	Orusco	Guadalajara	Spain
14. *I.* (*I.*) *gracilipes* (Braga, 1960)	Well	* Idanha-a-Nova	----------	Beira-Baixa	Portugal
15. *I.* (*A.*) *guarenensis* Camacho, 2003	Cave	Ojo Guareña, Erizo River	Cornejo	Burgos	Spain
16. *I.* (*A.*) *imuniensis* Camacho, 1987	Cave	*** Torca Morteros	Imunía	Burgos	Spain
	Cave	** Imunía	Imunía	Burgos	Spain
	Cave	** Bernías	Ptº de Lunada	Burgos	Spain
	Cave	** Lunada	Ptº de Lunada	Burgos	Spain
	Cave	** Becerral	La Gándara	Cantabria	Spain
	Cave	** V-142	Castro Valnera	Burgos	Spain
	Cave	** Calleja-Cueto	Arredondo	Cantabria	Spain
	Cave	La Cascada	Asón	Cantabria	Spain
	Hyporheic	Asón River	Arredondo	Cantabria	Spain
	Hyporheic	Asón River	Ramales de la Victoria	Cantabria	Spain
	Cave	Sima L31	Soba	Cantabria	Spain
	Cave	Cubío de Berolluncho	Las Machorras	Burgos	Spain
	Cave	Mortero de Astrana	Astrana	Cantabria	Spain
	Cave	Cueto-Coventosa-Cubera	Astrana	Cantabria	Spain
	Cave-spring	Red Silencio River	La Gándara	Cantabria	Spain
	Cave	Molino	Matienzo	Cantabria	Spain
	Cave	Comellante	Matienzo	Cantabria	Spain
	Cave	Cubilla	Ogarrio	Cantabria	Spain
	Cave	Río Chico	La Gándara	Cantabria	Spain
	Spring	Gándara River	La Gándara	Cantabria	Spain
	Spring	Pozo Azul	Covanera	Burgos	Spain
	Cave	CO054, Nacimiento Latarmá	Seguedal	Cantabria	Spain
	Cave	CO53, Huerta	Seguedal	Cantabria	Spain
	Cave	CO001, Hoyu las Muñecas	Seguedal	Asturias	Spain
	Cave	CO070, Cincho del Agua	Seguedal	Asturias	Spain
	Cave	CO073, Toyu	Venta Fresnedo	Cantabria	Spain
	Hyporheic	Latarma Stream	Venta Fresnedo	Cantabria	Spain
	Cave	B15	Escuaín	Huesca	Spain
	Cave	Pindal	Pimiango	Asturias	Spain
	Cave	Purón	Purón	Asturias	Spain
	Spring	Iguarán	Andoaín	Álava	Spain
	Cave	Covachos del Peñajorao	Camargo	Cantabria	Spain
I. sp. 3 – *I.* sp. nov. 2 (cryptic *I. imuniensis*)	Cave	** CO314, Pilar	Peñamellera	Asturias	Spain
I. sp. 3 – *I.* sp. nov. 2 (cryptic *I. imuniensis*)	Cave	** CO069, Pozo del Agua	Peñamellera	Asturias	Spain

17. *I.* (*A.*) *lamasonensis* Camacho, 2005	Spring	CO296, Estragüeña	Desfiladero Hermida	Cantabria	Spain
18. *I.* (*I.*) *lusitánica* (Braga, 1949)	Well	* Leça de Palmeira	Oporto		Portugal
	Hyporheic	Cavado Stream	Barcelos		Portugal
19. *I.* (*E.*) *magna* Camacho & Serban, 1998	Cave	* Infierno	Covadonga	Asturias	Spain
	Cave	CO084, Helechosa	Ptº de las Llaves	Cantabria	Spain
	Cave	** CO262, Pelacristo	Merodio	Asturias	Spain
	Cave	CO246, Tejo	Herrerias	Cantabria	Spain
	Hyporheic	Arbón River	Villayón	Asturias	Spain
	Cave	CO275, Divisada	Panes	Asturias	Spain
I. sp. 1 – *I.* sp. nov. 2 (cryptic *I. magna*)	Cave	** CO314, Pilar	Peñamellera	Asturias	Spain
I. sp. 1 – *I.* sp. nov. 2 (cryptic *I. magna*)	Cave	** CO276, Lobos	Herrerias	Cantabria	Spain
I. sp. 1 – *I.* sp. nov. 2 (cryptic *I. magna*)	Cave	** CO220 Carnero	Peñarrubia	Cantabria	Spain
20. *I.* (*A.*) *ortizi* Camacho, 1989	Cave	*** Rei Cintolo	Mondoñedo	Lugo	Spain
21. *Iberobathynella* (*I.*) *paragracilipes* Camacho & Serban, 1998	Well	* Quejigo	Jabugo	Huelva	Spain
	Well	Fuente Aroche	Gibraleón	Huelva	Spain
	Well	Hermita de San Isidro	Gibraleón	Huelva	Spain
	Well	Las Mesas	Gibraleón	Huelva	Spain
22. *I.* (*A.*) *parasturiensis* Camacho & Serban, 1998	Cave	*** CO209, Torca Treslajorá	Peñarrubia	Cantabria	Spain
	Cave	** CO034, Nava	La Fuente	Cantabria	Spain
	Cave	** Infierno	Covadonga	Asturias	Spain
	Cave	CO150, Grañaja	Suarías	Asturias	Spain
	Cave	CO275, Divisada	Panes	Asturias	Spain
23. *Iberobathynella pedroi* Camacho, 2003	Hyporheic	* Mondego River	Coimbra		Portugal
24. *I.* (*A.*) *rouchi* Camacho & Coineau, 1987	Hyporheic	* Guadalope Stream	Mas de las Matas	Teruel	Spain
	Hyporheic	Cinca Stream	Desfiladero de la Estada	Huesca	Spain
	Hyporheic	Aragón Stream	Santa Cillia de Jaca	Huesca	Spain
25. *I.* (*A.*) *serbani* Camacho, 2003	Hyporheic	* Lima River	Ponte de Lima	Oporto	Portugal
26. *I.* (*I.*) *valbonensis* Noodt & Galhano, 1969	Hyporheic	* Duero River	Areinho de Valbom		Portugal
	Hyporheic	Yeltes Stream	La Alberca	Salamanca	Spain
I. sp. 5 – *I.* sp. nov. 3 (cryptic *I. imuniensis*)	Cave	** Fonda	Carranza	Vizcaya	Spain

I. sp. 6 – *I.* sp. nov. 3 (cryptic *I. imuniensis*)	Cave	** Astui	Zestoa	Vizcaya	Spain
I. sp. 6 – *I.* sp. nov. 3 (cryptic *I. imuniensis*)	Cave	** Mina Elvira	Galdamés	Vizcaya	Spain
I. sp. – *I.* sp. nov. 1	Cave	** CO314, Pilar	Peñamellera	Asturias	Spain
I. sp. 4 – *I. cantabriensis*	Cave	** CO089, Sorios	Peñamellera	Asturias	Spain
I. sp. (juvenile specimens)	Cave	Cotera	Perelada	Asturias	Spain
I. sp. (juvenile specimens)	Spring	Fuentona de Ruente	Ruente	Cantabria	Spain
I. sp. (juvenile specimens)	Spring	Fuente de Quintana	La Pereda	Asturias	Spain
I. sp. (juvenile specimens)	Hyporheic	Berdoyas Stream	Vimianzo	Coruña	Spain
I. sp. (juvenile specimens)	Hyporheic	Gévalo Stream	Alcaudete de la Jara	Toledo	Spain
I. sp. (juvenile specimens)	Hyporheic	Pinhao Stream	Balsa	Balsa	Portugal
I. sp. (juvenile specimens)	Hyporheic	Cavado Stream	Entre-os-Pontes	Oporto	Portugal
I. sp. (juvenile specimens)	Hyporheic	Velez Stream	Viñuelas	Málaga	Spain
I. sp. (juvenile specimens)	Hyporheic	Veros Stream	Barbastro	Huesca	Spain
I. sp. (juvenile specimens)	Cave	Piscarciano	Soncillo	Burgos	Spain
I. sp. (juvenile specimens)	Hyporheic	Tejacillos Stream	Cañete	Cuenca	Spain
I. sp. (juvenile specimens)	Cave	SI44	Sierra Salvada	Alava	Spain
I. sp.	Hyporheic	Tajuña Stream	Luzaga	Guadalajara	Spain
I. sp.	Hyporheic	Tajuña Stream	Abanades	Guadalajara	Spain
I. sp. (juvenile specimens)	Hyporheic	Tajuña Stream	Armuña	Guadalajara	Spain
I. sp.	Hyporheic	Tajuña Stream	Loranca	Guadalajara	Spain
I. sp. (juvenile specimens)	Hyporheic	Tajuña Stream	Archilla	Guadalajara	Spain
27. *Paraiberobathynella* (*Pi.*) *fagei* (Delamare Deboutteville & Angelier, 1950)	Hyporheic	*Tech River	Boulou	Argelès	France
	Cave	Son Berenguer	Santa María del Camí	Mallorca	Spain
	Cave	Génova	Palma de Mallorca	Mallorca	Spain
	Cave	Campanet	Palma de Mallorca	Mallorca	Spain
	Well	Las Tarregas	San Pedro del Pinatar	Murcia	Spain
	Well	Los Piñacos	San Pedro del Pinatar	Murcia	Spain
	Well	0,4 Km of Girena River	Campo de Orba	Alicante	Spain
	Well	Los Picos	Pilar de la Horadada	Alicante	Spain
	Well	Beach	Canet de Berenguer	Valencia	Spain
	Well	Ondara-Benidoleig	Benidoleig	Alicante	Spain
	Well	Benidoleig-Orba	Benidoleig	Alicante	Spain
	Well	100m of Arboleas railway	German	Almeria	Spain

	Well	Marchenilla	Jimena de la Frontera	Cádiz	Spain
	Well	Punta Pinillos	Estepona	Málaga	Spain
	Well	Road from Ronda to Jimena	Faraján	Málaga	Spain
	Well	Almanzora Railway Albox	Cantoria	Almería	Spain
	Hyporheic	Small Stream Descansadero	Grazalema	Cádiz	Spain
	Hyporheic	Areta, Puente Lumpier	Ripodas	Navarra	Spain
	Hyporheic	Ter River	Torroella de Montgri	Gerona	Spain
	Hyporheic	Velez Stream	Viñuela	Málaga	Spain
	Hyporheic	Esla Stream	Huelde, Riaño	León	Spain
	Hyporheic	Tributary of Esla Stream	Vegacerneja	León	Spain
	Hyporheic	Sella Stream	Vega de Sella, Amieva	Asturias	Spain
	Hyporheic	Pequeño Stream	Puente de Onda	Castellón	Spain
	Hyporheic	Aller strea, Casomera	Aller	Asturias	Spain
	Hyporheic	Torio Stream	Felmín-Los Carmenes	León	Spain
	Hyporheic	Guadalbullón Stream	Carchalejo	Jaen	Spain
	Hyporheic	Lucainena Stream	Cherín	Granada	Spain
	Hyporheic	Alfambra Stream	Aguilar de Alfambra	Teruel	Spain
	Hyporheic	Alcanadre Stream	Angüés/Ponzano (N240)	Huesca	Spain
	Hyporheic	Frio Stream	Piscifactoria RiofrioLoja	Granada	Spain
	Hyporheic	Turón Stream	El Burgo	Málaga	Spain
	Hyporheic	Guadalhorce Stream	Alora/Vado de Alamo	Málaga	Spain
	Hyporheic	Turia Stream	C-3322, Villamarchante	Valencia	Spain
	Hyporheic	Guadalfeo Stream	Ptº Camacho, Orgiva	Granada	Spain
	Hyporheic	Majones Stream	Villareal de la Canal	Huesca	Spain
	Hyporheic	Deva Stream	San Pelayo, Camaleño	Asturias	Spain
	Hyporheic	Noguera Ribagorzana Stream	Arén	Lérida	Spain
	Hyporheic	Arnoia Stream	Celanova	Orense	Spain
	Cave	Can Sion	Palma de Mallorca	Mallorca	Spain
	Cave	Ses Rodes	Palma de Mallorca	Mallorca	Spain
	Hyporheic	Alcanadre Stream	Bierge	Huesca	Spain
	Cave	Sa Bassa Blanca	Alcudia	Mallorca	Spain
Pi. (*Pi.*) cf *fagei*	Cave	** Pileta	Benaoján	Málaga	Spain
	Cave	** Higuera	Pliego	Murcia	Spain
28. *Pi.* (*Pi.*) *maghrebensis* (Boutin & Coineau, 1987)	Well	*Haouz plain	Marrakech		Morocco
	Well	Route Nador to Berkane	Maghreb		Morocco
29. *Pi.* (*O.*) *notemboomi* (Camacho, 1989)	Well	* Los Picos	Pilar de la Horadada	Alicante	Spain
30. *Texanobathynella bowmani* Delamare Deboutteville, Coineau & Serban, 1975	Cave	Gorman Cave	San Saba County	Texas	USA

	Hyporheic	Issu Roaring Spring	Travis County?	Texas	USA
31. *T.* cf *bowmani*	Hyporheic	Live Oak	Crockett County	Texas	USA
32. *T. sachi* Cho, 1996	Hyporheic	Sant Clement, Canyon Park	San Diego	California	USA
	Hyporheic	Cottenwood River	San Diego	California	USA
33. *Texanobathynella aaronswinki* Camacho & Hutchins, 2021	Hyporheic	Sesson Creek	Hays County	Texas	USA
	Hyporheic	South Llano River	Kimble County	Texas	USA
34. *Texanobathynella coloradoensis* Camacho & Hutchins, 2021	Hyporheic	Colorado River	Bastrop County	Texas	USA

APPENDIX S3 Updated diagnoses of taxa higher than species of the Iberobathynellini tribe Camacho & Serban, 1998

Tribe Iberobathynellini Camacho & Serban, 1998

Type genus: 1.1. *Iberobathynella* Schminke, 1973

Genera:

1.2. *Californibathynella* Camacho & Serban, 1998

1.3. *Guadalopebathynella* Camacho & Serban, 1998

1.4. *Hexaiberobathynella* Camacho & Serban, 1998

1.5 *Paraiberobathynella* Camacho & Serban, 1998

1.6. *Texanobathynella* Delamare Debouteville, Coineau & Serban, 1975

1.1 Genus *Iberobathynella* Schminke, 1973

Diagnosis: Six- or seven-segmented AI. Eight to 10 teeth on labrum. Four to 10 teeth on *pars incisiva* of Md. Six or seven teeth on distal endite of MxI. Seven thoracopods, two-segmented exopod on most pairs with three or five setae; one or two dorsal setae on endopod. Outer lobe of male ThVIII with vertical or inclined main axis and triangular lateral side. Pleopods absent. Five to 24 spines on sympod of uropod; one to three setae on endopod; two to four setae on exopod. Five to 13 spines on furca. Pronounced or not anal operculum.

Type species: Iberobathynella lusitanica (Braga, 1949).

The genus is comprised of most of the species of the Iberobathynellini tribe: 22 species distributed in Portugal (6) and Spain (18).

Only *Iberobathynella celiana* Camacho, 2003 and *I. guarenensis* Camacho, 2003 have six-segmented AI.

Iberobathynella magna Camacho & Serban, 1998 is the only species with three segmented exopod on thoracopod IV and V.

Iberobathynella magna, *I. burgalensis* Camacho, 2005 and *I. guarenensis* have nine and ten main teeth on labrum, the rest of specie always eight.

1.2 *Californibathynella* Camacho & Serban, 1998

Diagnosis: Seven-segmented AI. Five main teeth (claws) on labrum. Five teeth on *pars incisiva* of Md. Five teeth and two setae on distal endite of MxI. One-segmented exopod of ThI with two setae, two-segmented exopod ThII to ThVII with four setae. Outer lobe of male

ThVIII well developed, with distal part oriented towards the posterior side, with rectangular indentation and a small and a long triangular prominence on anterior and posterior side, respectively; rectangular distal end of exopod located on outer lobe indentation with a lamella-like seta of basal region to above indentation. With first pair of pleopods as setae. Five spines on sympod of uropod; three setae on endopod; three well developed setae on exopod; endopod longer than exopod. Six spines on furca. Pronounced anal operculum.

Type species: C. californica (Schminke & Noodt, 1988).

The presence of pleopods, unique in the tribe, represents a structural element that clearly separates *C. californica* from the rest of the representatives of the tribe. The one-segmented exopod of ThI with only two apical setae is unusual, even in the family (most species that present a one-segmented exopod have three setae). Only species of the genus *Chilibathynella* display this state, however in this case, the exopod of all of the thoracopods is one-segmented. The distal endite of MxI has five claws and two setae on the inner edge (Schminke & Noodt, 1988, p. 293), another unique feature on the tribe (the usual condition is six or seven claws).

1.3 *Guadalopebathynella* Camacho & Serban, 1998

Amended diagnosis (after Camacho & Serban, 2000): Eight main hook-like teeth (claws) on labro with semicircular ventral side. Five to six teeth on the *pars incisiva* of Md and seven to eight claws on the *pars molaris*. Six very curved teeth on distal endite of MxI. Three-segmented MxII with a long seta on the proximal endite. Two-segmented exopod of ThI to ThVII. Outer lobe of male ThVIII with posterior part longer than anterior part and rectangular lateral side; exopod with wide lateral side and with two apical spines; dentate lobe shorter than inner lobe, with seven to eight teeth; inner lobe without setae on the distal end; anterior side of ThVIII very elongated, of similar width and length, with distal rim slightly inclined from latero-outer side toward latero-inner side. Without pleopods. Seven to eight spines on sympod of uropod; one long seta on endopod; four barbed setae on exopod; endopod longer than exopod. Seven to nine spines on furca. Not pronounced anal operculum.

Type species: G. puchi Camacho & Serban, 1998.

This species shares the following characters with *I. imuniensis*: six teeth in the distal endite of MxI and setation on the exopod and endopod of the uropod (five and one setae, respectively). However, the two species can be distinguished by the labrum. In *G. puchi*, the labrum has eight teeth whose distal part is very sharp and curved (hook-like), as a true claw, and the six teeth of the distal endite of MxI are more curved than in other species of the tribe. Also,

exclusive to this genus is the location of the dentate lobe of the male ThVIII in a small prominence.

1.4 *Hexaiberobathynella* Camacho & Serban, 1998

Amended diagnosis (after Camacho & Serban, 2000): Eight main teeth on labrum. Four to six teeth on the *pars incisiva* and seven to eight claws on the *pars molaris* of the Md. MxI: distal endite with six teeth. Three-segmented MxII, without setae on the proximal endite. One-segmented exopod on ThI, with three setae. Two-segmented exopod on ThII to ThVI, with four setae. Outer lobe of male ThVIII with the anterior part shorter than the posterior part and with the distal part strongly inclined toward the caudal part; postero-distal inclination of main axis; anterior part of dentate lobe shorter than inner lobe; distal end of inner lobe without setules; very small exopod and completely covered by the distal part of the outer lobe. Six to 15 spines on sympod of uropod; two short setae of different length on endopod; three barbed setae on exopod. Five to 11 spines on furca. Pronounced anal operculum.

Type species: Hexaiberobathynella hortezuelensis Camacho & Serban, 1998.

Species: *H. hortezuelensis* Camacho & Serban, 1998 and *H. mateusi* (Galhano, 1967).

1.5. *Paraiberobathynella* Camacho & Serban, 1998

Diagnosis: Seven-segmented AI. Five to nine teeth on the *pars incisiva* and seven to 10 teeth on the *pars molaris* of Md. Seven teeth on distal endite of MxI. Two- or three-segmented exopod of ThI with four or six setae, two- to four-segmented exopod on ThII to ThVII, three-segmented in most cases. Outer lobe of male ThVIII smaller than dentate lobe, with a distinctive basal part, distal end triangular or trapezoidal with the distal region close to the endopod; exopod covered by outer lobe, with two apical spines; inner lobe without setae; eight or nine teeth on dentate lobe. Five to 11 spines on sympod of uropod; one setae on endopod; setae on exopod. Five to 11 spines on furca. Not pronounced anal operculum.

Type species: Paraiberobathynella fagei (Delamare Deboutteville & Angelier, 1950).

Species: *Pi. notenboomi* (Camacho, 1989) and *Pi. maghrebensis* (Boutin and Coineau, 1978).

1.6 *Texanobathynella* Delamare Deboutteville, Coineau & Serban, 1975

Amended diagnosis (after Delamare Deboutteville, Coineau & Serban, 1975 and Camacho & Serban, 1998): Six- or seven-segmented AI. Four teeth on the *pars incisiva* and seven on the

pars molaris of the Md. Four-segmented MxII. Three-segmented exopod on ThII to ThVI, two-segmented on ThI and ThVII. Triangular outer lobe in male ThVIII; dentate lobe covered by small “tubercles” and distal end of inner lobe with setules; basipod with reduced exopod. Female thoracopod VIII reduced to very small lobes. Without pleopod. Six to 10 spines on sympod of uropod; three setae on exopod. Not pronounced anal operculum.

Type species: Texanobathynella bowmani Delamare Deboutteville, Coineau & Serban, 1975.

Species: *T. sachi* Cho, 1996, *T. coloradoensis* Camacho & Hutchins, 2021 and *T. aaronswinki* Camacho & Hutchins, 2021

TABLE S1 Taxonomic characters (numbered) for Iberobathynellini species and the two other European or North American genera together with summaries of the common property unifying each species state (unordered states, without character state polarities specified) used in the morphological phylogenetic analysis. 1. *I. asturiensis* Serban & Comas, 1978; 2. *I. parasturiensis* Camacho & Serban, 1998; 3. *I. cavadoensis* Noodt & Galhano, 1969; 4. *I. ortizi* Camacho, 1989; 5. *I. rouchi* Camacho & Coineau, 1987; 6. *I. imuniensis* Camacho, 1987; 7. *I. serbani* Camacho 2003; 8. *I. guarenensis* Camacho 2003; 9. *I. celiana* Camacho 2003; 10. *I. lamasonensis* Camacho 2005; 11. *I. cornejoensis* Camacho 2005. 12. *I. pedroi* Camacho 2003; 13. *I. espaniensis* Serban & Comas, 1978; 14. *I. cantabriensis* Camacho & Serban, 1998; 15. *I. magna* Camacho & Serban, 1998; 16. *I. burgalensis* Camacho, 2005; 17. *I. andalusica* Camacho, 2007; 18. *I. gracilipes* (Braga, 1960); 19. *I. paragracilipes* Camacho & Serban, 1998; 20. *I. lusitanica* (Braga, 1949); 21. *I. valbonensis* (Noodt & Galhano, 1969); 22. *I. barcelensis* (Galhano, 1970); 23. *Hexaiberobathynella mateusi* (Galhano, 1967); 24. *Hi. hortezuelensis* Camacho & Serban, 1998; 25. *Guadalopebathynella puchi* Camacho & Serban, 1998; 26. *Californibathynella californica* (Schminke & Noodt, 1998); 27. *Paraiberobathynella fagei* (Delamare Deboutteville & Angelier, 1950);28. *Pi. maghrebensis* (Boutin & Coineau, 1987); 29. *Pi. notenboomi* (Camacho, 1989); 30. *Texanobathynella bowmani* Delamare Deboutteville, Serban & Coineau, 1975; 31. *T. sachi* Cho, 1996; 32. *T.* cf *bowmani*; 33. *T. aaronswinki* Camacho & Hutchins, 2021; 34. *T. coloradoensis* Camacho & Hutchins, 2021; 35. *Montanabathynella pecosensis* Camacho & Hutchins, 2021; 36. *Parabathynella* cf *motasi* (37 in Table 4). OUTGROUP the cosmopolitan genus *Hexabathynella*: 37. *Hexabathynella sevillaensis* Camacho, 2005 (40 in Table 4).

Character	**Species**
1. Number of segments of AI	
0: 7	1-7, 10, 11, 12, 17- 29, 33, 35, 36
1: 6	8, 9, 30, 31, 32, 34, 37
2. Teeth of labrum	
0: normal	1-11,12,13-24,26-34,35, 36, 37
1: hook-like	25
3. Number of teeth on distal endite of MxI	
0: 7	12, 13-17, 18-22, 26-29
1: 6	1-11, 23-25,
2: 5	30-34, 36
3: 4	37
4: 8	35
4. Number of setae on first segment of MxII	
0: 1	5-6,9,11,13-22,25-34,36
1: 0	1-4,7-8,10,12,23,24
2: 2	35,37
5. Thoracopod VII	
0: present	1-11,12,13-22,25-34,35, 36
1: absent	23,24,37
6. Number of setae on segment 1 of endopod of ThI	
0: 2	2,5,6,9,11,12,13-22,25-29,30,32,33-34
1: 1	1,3,4,7,8,10,23,24,31,36,37
2: 3	35
7. Number of smooth setae on segment 2 of endopod of ThI	
0: 2	13,15,17,18-22,27-29,36
1: 1	1-11,12,14,16,23-26,30-

34,37
2: 3 35
8. Number of setae on the third segment of endopod of ThI
0: 2 1-29,36
1: 1 30-34,37
2: 3 35
9. Number of segment on exopod of ThI
0: 3 27,29
1: 2 13,15,16,18-
22,25,28,30,32-34,35,36
2: 1 1-11,12,14,17,23,24,26,
31,37
10. Number of dorsal setae on segment 1 of endopod of ThII-VII
0: 1 18-22
1: 0 1-17,23-34,35,36,37
11. Number of setae on segment 1 of exopod of ThI
0: 3 1-
11,12,14,17,18,19,21,23,24,31,35
1: 2 13,15,16,20,22,25-
29,30,32-34,36
2: 1 37
12. Number of segments of exopod of ThII-III
0: 3-4 27-34,35
1: 2 1-26,36,37
13. Number of segments of exopod of ThIV
0: more 2 (3-5) 15,27-34,35
1: 2 1-14,16-26,36,37
14. Number of segments of exopod of ThV
0: more 2 (3-5) 15,27-30,32-34,35
1: 2 1-14,16-26,31,36,37
15. Number of segments of exopod of ThVI
0: more 2 (3-5) 27-30,32-34,35
1: 2 1-26,31,36,37
16. Cuticle of female ThVIII
0: smooth 3,4,6,7,11-15,17,18-
33,35,36,37
1: wrinkled 1,2,5,8,10,16
? 9,34
17. Type of inner lobe of male ThVIII
0: with dense setae 1,13,18-20
1: without setae or sparse setae 2-12,14-17,23-34,35,36,37
? 21,22
18. Main exe of outer lobe of male ThVIII
0: vertical 18-22,25,26,27-29,30-
34,35,36,37
1: inclined 13-17,23,24
2: curved 1-11
19. Lateral side of outer lobe of the male ThVIII
0: triangular 1-11, 12,18-
22,23,24,27,28,30-34
1: rectangular 13-17,25,26,29,35,36,37
20. Pleopods
0: present 26,31,37
1: absent 1-25,27-30,32-34,35,36
21. Sympod of uropod

0: homonomous 14,15,16,18-22,29, 37
1: inhomonomous 1-12,13,17,23-25-28,30-34,35,36

22. Ctenidia on exopod of uropods
0: present 18-22,37
1: absent 1-17, 23-34,35,36

23. Number of barbed setae on the exopod of the uropod:
0: 5 or more 13,15,18-22,25,27-29,31,35
1: 4 6,9,11,14,16,17,23,24,26,36
2: 3 1,2,4,5,8,10,12,30,32,37
3: 2 3,7,33,34

24. Number of setae on the endopod of the uropod:
0: 3 or more 5,9,17-22,26,30-34,35,36
1: 2 1-4,8,10,12,23,24,37
2: 1 6,7,13-15,25,27-29,
3: 0 11,16

25. Exopod/endopod of the uropod:
0: = 1,2,5,11,16-19,25,28,30-34,35,36
1: < 3,4,8,9,21,23,26,27,29
2: >or= 6,7,13,14,37
3: <or= 10,12,20,22,24
? 15

26. Anal operculum (unordered)
0: Not protruded 5,6,13-16,18-22,25,27-34,35
1: Protruded 1-4,7-12,17,23-24,26,36,37

27. Maximun size:
0: <1.3 (a) Small 4,7,9,10,12,26,36,37
1: 1.3-1.9 (b) Medium 1,2,3,5,8,11,13-17,23-25,31,35
2: >1.9 (c) Large 6,18-22,27-29
? 30,32-34

28. Number of segments of AII
0: 6 35
1: 5 36,37
2: 3 1-34

TABLE S2 COI genetic distances (%) between identified morphospecies and/or cryptic species found in different caves in Burgos, Vizcaya, Cantabria and Asturias *Type locality. *I.* sp. (CO314) = ***I.* sp. nov. 1 (**cryptic *I. magna*); *I.* sp. (CO069) = *I.* sp. 1 (CO314) = *I.* sp. 3 (CO314) = *I.* sp. 3 (CO069) = ***I.* sp. nov. 2 (**cryptic *I. imuniensis*); *I.* sp. 2 (CO209) = *I.* sp. 2 (CO314) = *I.* sp. 4 (CO314)= *I.* sp. 4 (CO089) = ***I. cantabriensis;*** *I.* sp. 5 (Fonda) = *I.* sp. 6 (Astui) = ***I.* sp. nov. 3 (**cryptic *I. imuniensis*). Abbreviations: *I. cantab.* = *I. cantabriensis.* Same colour represent same species

	***I.* sp.** (CO314) *I.* sp. nov. 1	***I.* sp.** (CO069) *I.* sp. nov. 2	***I.* sp. 1** (CO314) *I.* sp. nov. 2	***I.* sp. 2** (CO209) *I. cantab.*	***I.* sp. 2** (CO314) *I. cantab.*	***I.* sp. 3** (CO314) *I.* sp. nov. 2.	***I.* sp. 3** (CO069) *I.* sp. nov. 2	***I.* sp. 4** (CO314) *I. cantab*	***I.* sp. 4** (CO089) *I. cantab.*	*I.* sp. 5 (Fonda) *I.* sp. nov. 3	*I.* sp. 6 (Astui) *I.* sp. nov. 3	*Paraiberobathynella*
***I.* sp. (CO314)**	0.0-0.8											16.2-19.5
***I.* sp. (CO069)**	11.6-17.7	1.6-1.8										17.7-19.3
***I.* sp. 1 (CO314)**	11.6-12.3	**5.7-7.4**	0.0-0.2									17.0-18.6
***I.* sp. 2 (CO209)**	14.6-16.7	16.2-18.1	15.9-16.3	0.0-0.2								14.2-17.6
***I.* sp. 2 (CO314)**	14.6-15.3	16.2-18.4	16.3-17.9	**4.7-8.1**	0.0-9.3?							15.3-18.3
***I.* sp. 3 (CO314)**	11.0-11.4	**2.8-4.7**	**4.5-5.0**	16.7-16.9	17.7	0.0						15.3-19.3
***I.* sp. 3 (CO069)**	11.6-12.3	**1.6-2.4**	**5.0-6.9**	15.7-16.7	16.2-17.0	**2.2-3.0**	0.0-0.6					15.8-18.8
***I.* sp. 4 (CO314)**	14.4-14.8	16.1-17.8	16.6-16.8	**3.2-3.4**	**1.4**	16.1-17.1	15.6-16.4	0.0				13.9-17.6
***I.* sp. 4 (CO089)**	14.9-15.5	15.7-17.6	15.9-17.1	**2.6-3.0**	**3.4-3.6**	15.7-17.4	15.2-16.2	**1.0-2.2**	0.0-1.6			13.9-17.8
***I.* sp. 5 (Fonda)**	16.6-17.3	18.8-21.3	18.1-18.9	16.9-17.6	16.9-21.1	18.6-19.1	18.3-19.3	16.1	15.9-17.7	**0.2-0.4**		14.5-15.9
***I.* sp. 6 (Astui)**	15.1-15.3	19.3-20.1	19.1-19.3	18.1-18.3	18.1-20.4	18.8	19.3-19.5	19.1	17.5-18.3	**8.9-9.1**	0.0	16.4-19.1
I. magna												
CO262	15.1-18.5	15.7	17.0	16.9-17.2	15.1-18.5	16.4	16.1-16.4	15.4	16.2-17.3	15.3-15.9	18.5	17.1-21.7
I. cantabriensis												

CO220	16.1-16.6	17.4	17.2-17.4	10.9-11.4	10.9-11.2	18.0	17.4-17.7	9.5	9.8-10.0	17.9-18.4	18.7	16.4-19.9
***CO276**	13.3-13.5	14.6-16.2	13.5-14.8	**4.9-5.3**	**6.0-7.9**	15.6	14.6-14.9	**4.8**	**5.0-5.3**	16.8-17.3	16.8	13.0-16.1
I. imuniensis												
*** Torca Morteros**	17.9-18.1	15.6-17.7	16.3-16.8	18.3-18.8	17.9-19.0	15.8-16.1	15.6-16.1	17.3-17.5	17.6-18.0	14.5-15.7	14.6-15.3	18.1-21.5
I. parasturiensis												
*** CO209**	14.8-17.8	19.1-20.1	17.2-18.2	14.3-16.8	15.9-18.4	16.5-18.0	16.3-18.4	14.5-15.0	14.3-17.2	14.0-14.8	14.4-15.0	13.7-18.9
Infierno Cave	16.9-17.8	17.7-18.4	17.7-18.5	15.0-15.5	16.1-18.6	17.5-18.2	17.4-18.7	14.7-15.7	14.5-15.5	14.1-15.1	14.7-15.0	14.7-19.1
