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Fig. 124. A,B. Sphaerokodisis flabellum (Thomson & Mackinnon, 1911): (A). Lectotype, natural size; (B). AM G15297, natural size; C. Sphaerokodisis tenuis (Thomson & Rennet, 1931), AM G15600, natural size x 0.5.



Fig. 125. Sphaerokodisis flabellum (Thomson & Mackinnon, 1911). A-F. Lectotype: (A-C). Polyps; (D-E). Axial internodes; (F). Twig fragment. G-L. AM G5679: (G-J). Polyps; (K). Coenenchyme; (L). Twig fragment.



Fig. 126. Sphaerokodisis flabellum (Thomson & Mackinnon, 1911), lectotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 127. Sphaerokodisis flabellum (Thomson & Mackinnon, 1911), lectotype, sclerites: A. Polyp/twig adaxial juncture; B. Branch coenenchyme.



Fig. 128. Sphaerokodisis tenuis (Thomson & Rennet, 1931), holotype: A-C. Polyps; D-E. Axial internodes.



Fig. 129. Sphaerokodisis tenuis (Thomson & Rennet, 1931), holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 130. Sphaerokodisis tenuis (Thomson & Rennet, 1931), holotype, sclerites: Branch coenenchyme.



Fig. 131. Sphaerokodisis australis (Thomson & Mackinnon, 1911), fragments of the syntypes, all natural size.



Fig. 132. Sphaerokodisis australis (Thomson & Mackinnon, 1911), syntype: A. Polyp; B. Coenenchyme; C-D. Axial internodes; E. Twig fragment.



Fig. 133. Sphaerokodisis australis (Thomson & Mackinnon, 1911). A-B, D-H. NTM C2397: (A-B, D). Polyps; (E). Coenenchyme; (F-G). Axial internodes; (H). Twig fragment. C. AM E2127, polyp.



Fig. 134. Sphaerokodisis australis (Thomson & Mackinnon, 1911), syntype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 135. Sphaerokodisis australis (Thomson & Mackinnon, 1911), sclerites: A. Syntype, branch coenenchyme; B. NTM C2397, stem coenenchyme; C. NTM C2397, branch coenenchyme; D. AM G11638, polyp body.



Fig. 136. Sphaerokodisis australis (Thomson & Mackinnon, 1911), NTM C2397, natural size x 0.5.



Fig. 137. Sphaerokodisis australis (Thomson & Mackinnon, 1911), AM E2127, natural size x 0.6.



Fig. 138. Jasminisis zebra n.sp., holotype, natural size.



Fig. 139. Jasminisis zebra n.sp., holotype: A-G. Polyps; H. Coenenchyme; I-K. Axial internodes; L. Twig fragment.



Fig. 140. Jasminisis zebra n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp head.



Fig. 141. Jasminisis zebra n.sp., holotype, sclerites: Polyp base.



Fig. 142. Jasminisis zebra n.sp., holotype, sclerites: Twig coenenchyme.



Fig. 143. Jasminisis zebra n.sp., paratypes: A. AM G15599; B. AM G15601; C. AM G15602; D. AM G15603. All natural size x 0.4.



Fig. 144. Jasminisis zebra n.sp., paratype, AM G12017 fragments, natural size.



Fig. 145. *Jasminisis zebra* n.sp., paratype, AM G12017, sclerites: A. Anthopoma; B. Polyp head; C. Polyp base; D. Coenenchyme.



Fig. 146. Jasminisis candelabra n.sp., part of type series: A. Holotype; B-D, F-J. Paratypes, AM G15591 (part); E. Paratype, AM G8017.



Fig. 147. Jasminisis candelabra n.sp., holotype: A-D. Polyps; E. Coenenchyme; F-H. Axial internodes; I. Twig fragment.



Fig. 148. Jasminisis candelabra n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 149. Jasminisis candelabra n.sp., holotype, sclerites: Branch coenenchyme.



Fig. 150. Jasminisis deceptrix n.sp., holotype, natural size.



Fig. 151. Jasminisis deceptrix n.sp., holotype: A-G. Polyps; H. Coenenchyme; I-K. Axial internodes; L. Twig fragment.



Fig. 152. Jasminisis deceptrix n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp head.



Fig. 153. Jasminisis deceptrix n.sp., holotype, sclerites: A. Polyp base; B. Branch coenenchyme.



Fig. 154. Jasminisis deceptrix n.sp., paratype, AM G8016, natural size.



Fig. 155. Jasminisis cavatica n.sp., type series: A. Holotype. All natural size.



Fig. 156. Jasminisis cavatica n.sp., holotype: A-D. Polyps; E. Coenenchyme; F-H. Axial internodes; I. Twig fragment.



Fig. 157. Jasminisis cavatica n.sp., sclerites: A-E. Holotype: (A). Anthopoma; (B). Tentacles; (C-D). Polyp body; (E). Branch coenenchyme. F. Paratype, NTM C917, surface coenenchyme.



Fig. 158. Ktenosquamisis bicamella n.sp., holotype, natural size.



Fig. 159. Ktenosquamisis bicamella n.sp., holotype: A-F. Polyps; G. Coenenchyme; H-K. Axial internodes; L. Twig fragment.



Fig. 160. Ktenosquamisis bicamella n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Coenenchyme.



Fig. 161. Myriozotisis heatherae n.sp., holotype, natural size.


Fig. 162. Myriozotisis heatherae n.sp., holotype: A-H. Polyps; I-J. Twig fragment.



Fig. 163. Myriozotisis heatherae n.sp., holotype: A-D. Axial internodes.



Fig. 164. Myriozotisis heatherae n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Adaxial polyp sclerites.



Fig. 165. Myriozotisis heatherae n.sp., sclerites: A. Holotype, twig coenenchyme; B. Paratype, QM G301210, basal stem coenenchyme.



Fig. 166. Myriozotisis spinosa n.sp., holotype, natural size.



Fig. 167. Myriozotisis spinosa n.sp., holotype: A-F. Polyps; G. Coenenchyme; H-J. Axial internodes; K. Twig fragment.



Fig. 168. Myriozotisis spinosa n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Small polyp body scales; D. Adaxial polyp platelets.



Fig. 169. Myriozotisis spinosa n.sp., holotype, sclerites: A. Large polyp body scales; B. Twig coenenchyme.



Fig. 170. *Iotisis alba* (Nutting, 1910). Reproduction of Nutting's pl. IV of the holotype of *Mopsea alba*. 2. Colony, natural size. 2a. Branch, natural size x 5.



Fig. 171. Iotisis alba (Nutting, 1910), holotype: Polyp.



Fig. 172. *Iotisis alba* (Nutting, 1910), holotype: Axial internodes.



Fig. 173. Iotisis alba (Nutting, 1910), holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Branch coenenchyme.



Fig. 174. Peltastisis uniserialis Nutting, 1910, holotype fragment.



Fig. 175. *Peltastisis uniserialis* Nutting, 1910, holotype: A-B. Axial internodes.



Fig. 176. Peltastisis uniserialis Nutting, 1910, holotype, sclerites.



Fig. 177. Peltastisis uniserialis Nutting, 1910, holotype, sclerites: A. Anthopoma; B. Polyp body.



Fig. 178. Peltastisis uniserialis Nutting, 1910, holotype, sclerites: Coenenchyme.



Fig. 179. Peltastisis cornuta Nutting, 1910, part of holotype fragment.



Fig. 180. *Peltastisis cornuta* Nutting, 1910, holotype: A. Large abaxial polyp sclerife; B. Axial internode.



Fig. 181. Peltastisis cornuta Nutting, 1910, holotype, sclerites.



Fig. 182. Peltastisis cornuta Nutting, 1910, holotype, sclerites: A. Polyp; B. Coenenchyme.



Fig. 183. Lissopholidisis furcula n.sp., holotype, natural size.



Fig. 184. Lissopholidisis furcula n.sp., holotype: Polyp, abaxial stay not cradling the head.



Fig. 185. Lissopholidisis furcula n.sp., holotype: A-D. Polyps; E. Coenenchyme; F-G. Axial internodes; H-K. Large abaxial polyp sclerites; L. Twig fragment.



Fig. 186. Lissopholidisis furcula n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Stem coenenchyme.



Fig. 187. Lissopholidisis ampliflora n.sp., holotype, natural size.



Fig. 188. Lissopholidisis ampliflora n.sp., holotype: A. Large abaxial polyp sclerite; B-C. Axial internodes.



Fig. 189. Lissopholidisis ampliflora n.sp., holotype: Polyps.



Fig. 190. Lissopholidisis ampliflora n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Abaxial polyp stays; D. Polyp body; E. Coenenchyme.



Fig. 191. Lissopholidisis nuttingi (Grant, 1976), holotype, natural size.



Fig. 192. Lissopholidisis nuttingi (Grant, 1976), holotype: Polyp.



Fig. 193. Lissopholidisis nuttingi (Grant, 1976), holotype: A-C. Axial internodes.



Fig. 194. Lissopholidisis nuttingi (Grant, 1976), holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Upper stem coenenchyme; E. Basal stem coenenchyme.



Fig. 195. Minuisis pseudoplana Grant, 1976, holotype, natural size x 3.



Fig. 196. Minuisis pseudoplana Grant, 1976, holotype: A-D. Polyps; E. Coenenchyme; F-G. Axial internodes; H. Twig fragment.



Fig. 197. Minuisis pseudoplana Grant, 1976, holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Branch coenenchyme.



Fig. 198. Minuisis granti n.sp.: A. Holotype, natural size x 3; B. Paratype, NZOI P946, natural size x 5.



Fig. 199. Minuisis granti n.sp., 1976, holotype: A-G. Polyps; H. Coenenchyme; I. Axial internode; J. Twig fragment.



Fig. 200. Minuisis granti n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Branch coenenchyme.







Fig. 202. Primnoisis deliculata (Hickson, 1907), syntype: A-C. Polyps; D. Coenenchyme; E. Axial internode.



Fig. 203. Circinisis circinata Grant, 1976, type series: A. Holotype. All natural size.



Fig. 204. Circinisis circinata Grant, 1976, holotype: A. Polyp; B-C. Axial internodes; D. Twig fragment.



Fig. 205. Circinisis circinata Grant, 1976, holotype, sclerites: A. Anthopoma and tentacles; B. Polyp body; C. Sub-surface of the twig coenenchyme.



Fig. 206. Gorgonisis elyakovi n.sp., holotype, natural size x 0.75.



Fig. 207. Gorgonisis elyakovi n.sp., holotype: A-E. Polyps; F-H. Axial internodes; I. Twig fragment.


Fig. 208. Gorgonisis elyakovi n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Twig coenenchyme; E. Main branch coenenchyme.



Fig. 209. Pangolinisis cia n.sp., holotype, uatural size.



Fig. 210. Pangolinisis cia n.sp., holotype: A-F. Polyps; G-H. Coenenchyme; I-K. Axial internodes; L. Twig fragment.



Fig. 211. Pangolinisis cia n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Twig coenenchyme; E. Stem coenenchyme.



Fig. 212. Plexipomisis thetis n.sp., holotype, natural size.



Fig. 213. Plexipomisis thetis n.sp., holotype: A-C. Polyps; D. Coenenchyme; E-F. Axial internodes; G. Twig fragment.



Fig. 214. Plexipomisis thetis n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Adaxial polyp margin.



Fig. 215. *Plexipomisis thetis* n.sp., holotype, sclerites: A. Polyp body; B. Sub-surface of polyp body, stellate plates; C. Twig coenenchyme; D. Sub-surface of stem coenenchyme.



Fig. 216. Plexipomisis elegans (Thomson & Mackinnon, 1911), lectotype, natural size.



Fig. 217. Plexipomisis elegans (Thomson & Mackinnon, 1911), lectotype: A-D. Polyps; E. Coenenchyme; F-H. Axial internodes; I. Twig fragment.



Fig. 218. Plexipomisis elegans (Thomson & Mackinnon, 1911), lectotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 219. Plexipomisis elegans (Thomson & Mackinnon, 1911), sclerites: A. Lectotype, twig coenenchyme; B. AM E142, upper stem coenenchyme.



Fig. 220. Zignisis repens (Briggs, 1915): A. Holotype; B. WAM 1-95. All natural size.



Fig. 221. Zignisis repens (Briggs, 1915), holotype: A-F. Polyps; G. Coenenchyme; H-I. Axial internodes; J. Twig fragment.



Fig. 222. Zignisis repens (Briggs, 1915), paratype, AM G11801: A-E. Polyps; F. Coenenchyme; G. Twig fragment.



Fig. 223. Zignisis repens (Briggs, 1915), holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 224. Zignisis repens (Briggs, 1915), sclerites: A. Holotype, twig coenenchyme; B. Paratype, AM G11801, polyp & coenenchyme.



Fig. 225. Zignisis phorinema n.sp., holotype, natural size.



Fig. 226. Zignisis phorinema n.sp., holotype: A-G. Polyps; H. Coenenchymc; I-J. Axial internodes; K. Twig fragment.



Fig. 227. Zignisis phorinema n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles.



Fig. 228. Zignisis phorinema n.sp., holotype, sclerites: Polyp body.



Fig. 229. Zignisis phorinema n.sp., holotype, sclerites: A. Thin branch coenenchyme; B. Main branch coenenchyme; C. Stem coenenchyme.



Fig. 230. Zignisis lornae n.sp., holotype, natural size.



Fig. 231. Zignisis lornae n.sp., holotype: A-F. Polyps; G. Coenenchyme; H. Twig Iragment.



Fig. 232. Zignisis lornae n.sp., axial internodes: A-B, D-E. Paratype, NTM C2485; C, F. Holotype.



Fig. 233. Zignisis lornae n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles.



Fig. 234. Zignisis lornae n.sp., holotype, sclerites: A. Polyp body; B. Branch coenenchyme; C. Stem coenenchyme.



Fig. 235. Zignisis alternata (Utinomi, 1975): A. Holotype; B. NTM C10924; C. WAM 24-74. All natural size.



Fig. 236. Zignisis alternata (Utinomi, 1975), holotype: A-F. Polyps; G-I. Axial internodes; J. Coenenchyme; K. Twig fragment.



Fig. 237. Zignisis alternata (Utinomi, 1975), holotype, sclerites: A. Anthopoma; B. Tentacles.



Fig. 238. Zignisis alternata (Utinomi, 1975), holotype, sclerites: A. Polyp body; B. Branch coenenchyme.



Fig. 239. Zignisis bifoliata n.sp., holotype, natural size.



Fig. 240. Zignisis bifoliata n.sp., holotype: A-E. Polyps; F. Coenenchyme; G-H. Axial internodes; I-J. Twig fragments.



Fig. 241. Zignisis bifoliata n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body.



Fig. 242. Zignisis bifoliata n.sp., holotype, sclerites: Branch coenenchyme.



Fig. 243. Zignisis sp. indet. Details of Studer's Mopsea encrinula specimen obtained by the SMS Gazelle: A. Anthopoma; B. Adaxial octant; C. Polyp; D. Coenenchyme; E. Axial internode.


Fig. 244. Annisis sprightly n.sp.: A. Holotype; B. Paratype, NTM C2473. Both natural size.



Fig. 245. Annisis sprightly n.sp., holotype: A-C. Polyps; D. Coenenchyme; E-F. Axial internodes; G. Twig fragment.



Fig. 246. Annisis sprightly n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles.



Fig. 247. Annisis sprightly n.sp., holotype, sclerites: A. Polyp body; B. Thin branch coenenchyme; C. Primary branch coenenchyme; D. Large scale from polyp base.



Fig. 248. Florectisis rosetta n.sp., holotype, natural size.



Fig. 249. Florectisis rosetta n.sp., holotype: A-E. Polyps; F. Coenenchyme; G-I. Axial internodes; J. Twig fragment.



Fig. 250. Florectisis rosetta n.sp., holotype, sclerites: A. Anthopoma; B. Tentacles; C. Polyp body; D. Twig coenenchyme.



Fig. 251. Modes of axial branching, (continued over page).









Fig. 257.



















Fig. 276.







Fig. 288.









Fig. 306.







Fig. 318.











Fig. 326.