

family Ammonoconidæ (Pl. VIII.). They correspond to the Homocœla or Asconidæ among the Calcarea, and are, like these, thin-walled porous tubules, "without separate flagellated chambers, the whole of the inner surface being covered with flagellated cells."¹ The different forms of these Cannocœla, which I could distinguish, may be disposed into three different genera (*Ammolyntus*, *Ammosolenia*, and *Ammonoconia*), and these correspond to the three genera which I have described in my Monograph of the Calcisponges as *Olyntus*, *Leucosolenia* (or *Soleniscus*), and *Auloplegma*.

All the other Keratosa of the deep sea are of larger size, and belong to the second order, Domatocœla. They correspond to the calcareous Heterocœla of Poléjaeff, and possess, like these, "separate flagellated chambers lined with flagellated cells, the remaining parts of the inner surface being covered with pavement-epithelium." The Domatocœla of the deep sea may be disposed into three different families: Psamminidæ, Spongeliidæ, and Stannomidæ. The Psamminidæ (*Psammina*, *Holopsamma*, *Psammopemma*) produce no spongin-fibres; their pseudo-skeleton is composed of xenophya or of foreign bodies, which are crowded in the ground-mass of the mesoderm. The Spongeliidæ (*Cerelasma*, *Psammophyllum*) possess a network of spongin-fibres which enclose foreign bodies. The Stannomidæ, finally, are distinguished by fine bundles of fibrillæ, between which the xenophya are crowded in the maltha (*Stannophyllum*, *Stannarium*, *Stannoma*).

Synopsis on the Four Families of Deep-Sea Keratosa.

<p>I. CANNOCÆLA.</p> <p>Tubular canal-system, on the Asconal-type (similar to the Asconidæ).</p>	}	<p>No spongin-skeleton.</p>	{	<p>Pseudo-skeleton composed of xenophya, which are crowded in the maltha,</p>	<p>1. AMMOCONIDÆ.</p>
<p>II. DOMATOCÆLA.</p> <p>Vesicular canal-system, on the Leuconal-type, with large flagello chambers (similar to the Spongeliidæ).</p>	}	<p>No spongin-skeleton.</p>	{	<p>Pseudo-skeleton composed of xenophya, which are crowded in the maltha,</p>	<p>2. PSAMMINIDÆ.</p>
	}	<p>Spongin-skeleton composed of horny fibres, fibrillæ or lamellæ.</p>	{	<p>Spongin-skeleton reticular, composed of anastomosing fibres, including xenophya,</p>	<p>3. SPONGELIDÆ.</p>
	}		{	<p>Spongin-skeleton fibrillar, composed of fibrillæ, not anastomosing, and never including xenophya,</p>	<p>4. STANNOMIDÆ.</p>

¹ *Loc. cit.*, p. 35.