

branches are longest in the middle (up to 10 mm.), and gradually decrease in size towards the ends of the radial canal; they are very short at both ends. The genitalia proceed from their lower wall. The four genital glands (figs. 5, 6) seen from the subumbrellar surface have the shape of broad elliptical or almost circular leaves, occupying the centre of the radial canals from which they hang freely into the umbrella cavity (figs. 1, 2). On closer inspection it is shown that each gland forms a delicately-pinnated leaf, whose 20 to 30 pairs of pinnated branches are lamellæ placed perpendicularly (*s*). The upper edge of each lamella is connected with a transverse pinnated branch of the radial vessel, whose lower (subumbral) wall forms a fold; the lower free edge of each lamella is serrated or rather, split up into a number of finger-shaped points. The number of these points is greatest (10 to 15) in the broadest lamellæ in the middle of each gland, smallest in the narrowest lamellæ at the two ends of the genitalia. Each lamella is, therefore, in itself the half of a pinnated leaf, whose straight upper edge has grown to the transverse branch of the radial canal, whilst the divided lower edge projects freely into the umbrella cavity.

Order III. TRACHOMEDUSÆ, Hæckel, 1866.

Craspedotæ with auditory clubs, which sometimes stand freely on the umbrella margin, and are sometimes enclosed in auditory vesicles, with endodermal otolite cells. Ocelli at the basis of the tentacles usually wanting. Genitalia always in the course of the radial canals. Number of the radial canals, sometimes four, sometimes six, sometimes eight, never more; between these there are often centripetal blind canals. The velum is firm and broad. Ontogenesis, so far as we yet know, hypogenesis (or direct development without alternation of generations) usually accompanied by metamorphosis.

Family, TRACHYNEMIDÆ, Gegenbaur, 1856.

TRACHYNEMIDÆ, Hæckel, *System der Medusen*, 1879, p. 255, taf. xvii.

Trachomedusæ with eight radial canals, along whose course the eight genitalia lie; with long tube-like stomach without ventral peduncle; with auditory clubs, which are seldom free but usually enclosed in auditory vesicles lying on the umbrella margin.

Sub-family, PECTYLLIDÆ, Hæckel, 1877.

Trachynemida with sucking cups on the tentacles, with radial mesogonia or broad mesenterial bands.