

NEPHRIDIA

- ❖ Excretory organs are nephridia
- ❖ nephridia occurs in all segments excepting 1st 3 & last segment

- ❖ ectodermal in origin
- ❖ small, coiled tubular structure & occur in huge number

- ❖ **3 kind of nephridia –**

1. **SEPTAL NEPHRIDIA**
2. **INTEGUMENTARY NEPHRIDIA**
3. **PHARYNGEAL NEPHRIDIA**

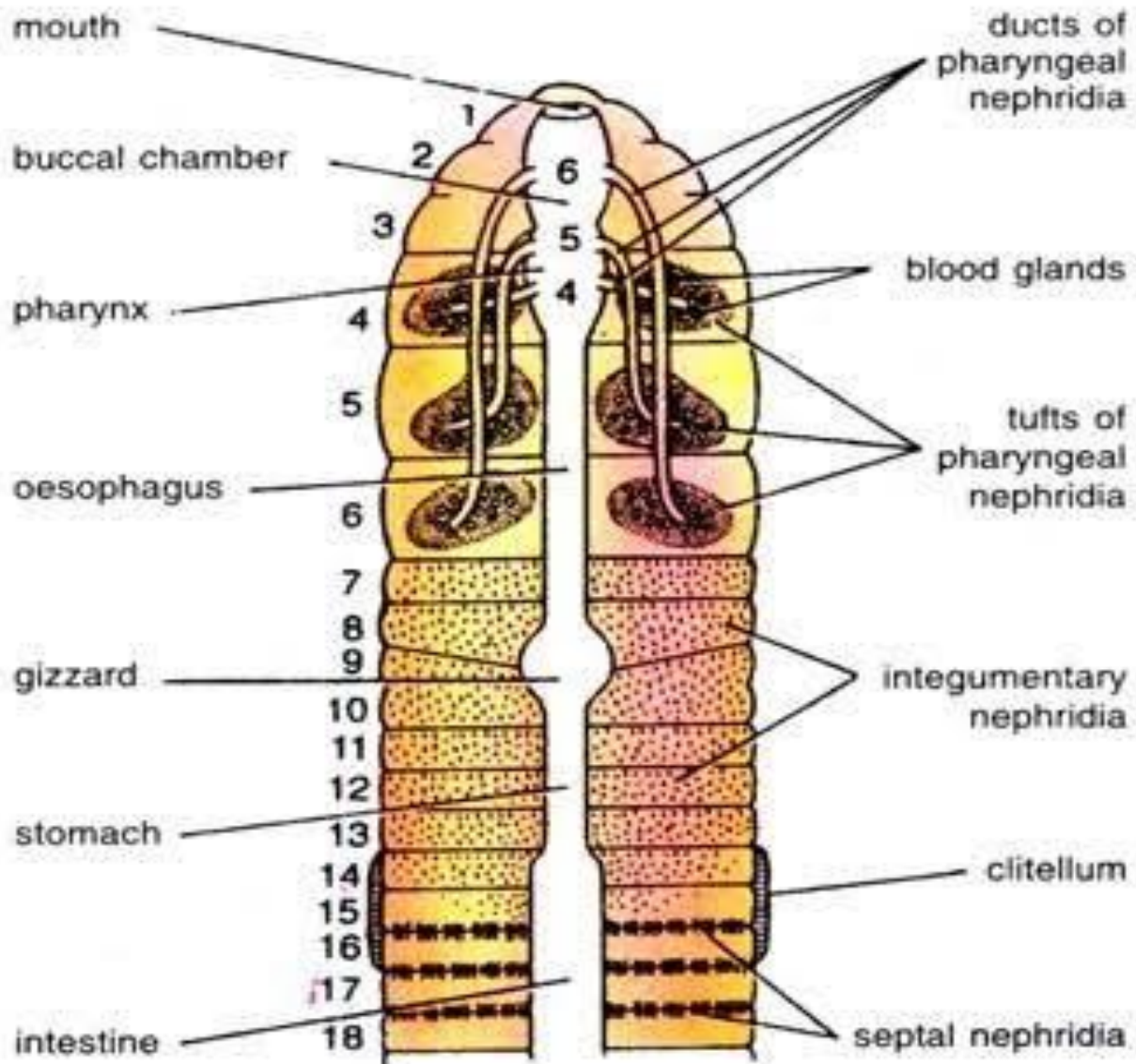


Fig. 66.21. *Pheretima*. Different types of nephridia and general plan of their distribution.

SEPTAL NEPHRIDIA

- ❖ It remain attached to the 2 faces of septum
- ❖ occur from 15 th segment backward
- ❖ in each segment there are 80-100 nephridia

STRUCTURE OF SEPTAL NEPHRIDIA

- Main body formed by straight lobe & narrow, spirally twisted loop
- funnel like nephrostome
- short neck
- terminal nephridial duct
- nephrostome or funnel is a rounded structure

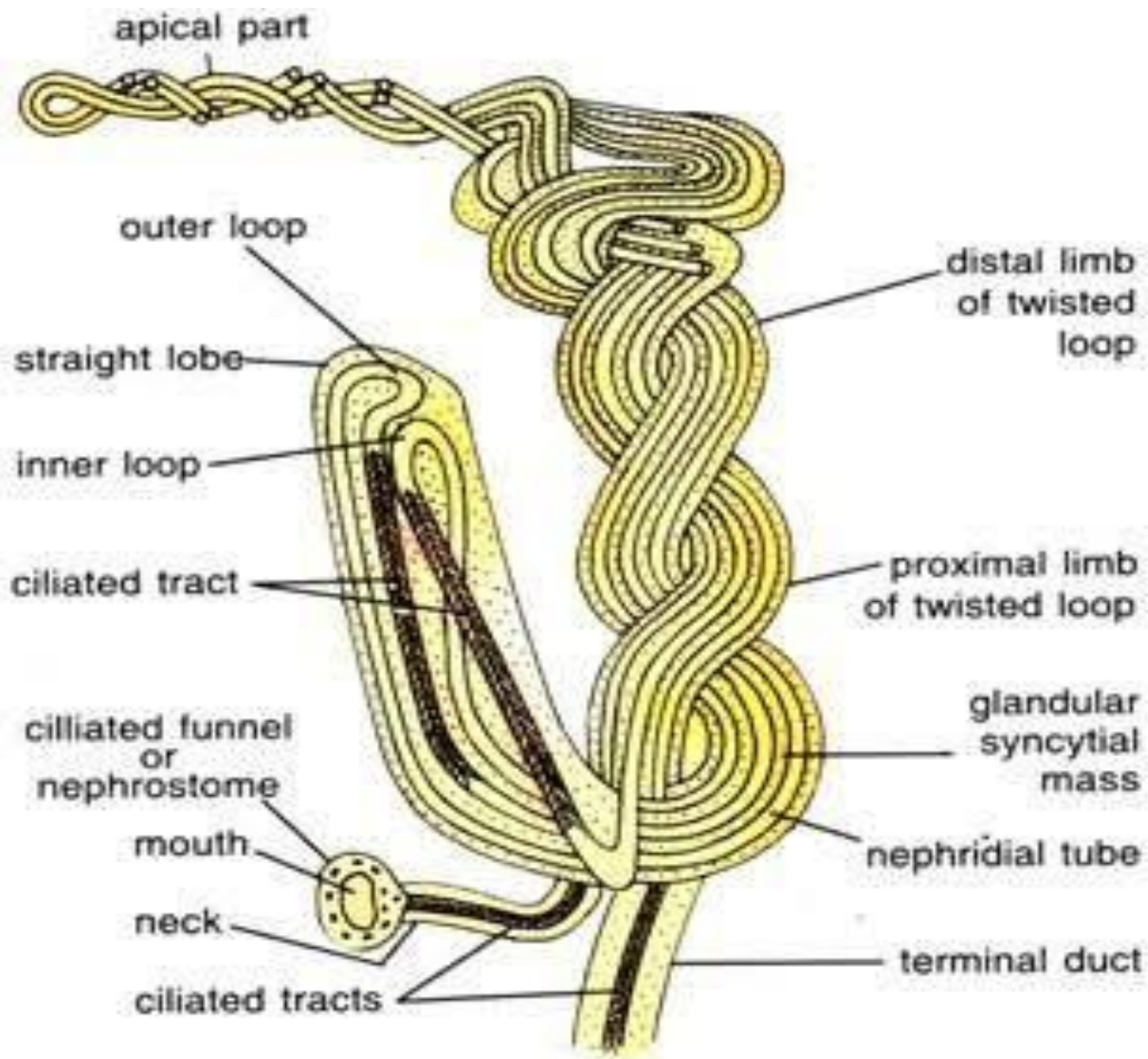


Fig. 66.22. *Pheretima*. A septal nephridium.

- mouth of the funnel communicates with coelom provided with large upper lip & small lower lip
- lips are ciliated
- main lobe consist of proximal & distal limb
- terminal ducts opens into septal excretory canal

INTEGUMENTARY NEPHRIDIA

- Smaller in size
- occur on inner surface of integument in all segment except first 2
- they occur 200-250 in each segment
- lack nephrostome
- open to outside by nephridiopores

PHARYNGEAL NEPHRIDIA

- as large as septal nephridia
- occur in 3 pairs

- present on 4, 5, 6 th segment on either side of pharynx & oesophagus

- nephrostome absent
- they have digestive function, called peptic nephridia
- opens to alimentary canal

- ❖ septal & pharyngeal nephridia open into alimentary canal- ENTERONEPHRIC
- ❖ Integumentary nephridia open to the outside directly- EXONEPHRIC
- ❖ Enteronephric system helps in conservation of water in body

PROTONEPHRIDIA

- primitive type
- it terminates in coelom as blind tube
- closed end are provided with tube cells or solenocytes
- solenocyte is a rounded ciliated cell connected to protonephridia by thin tube
- excretory fluid enters through walls of nephridial tubules
- fluid driven into lumen of nephridium by flagellum
- forced to exterior through nephridiopore
- found in – some polychaetes such as Glycera, Vanadis

METANEPHRIDIA

- far advanced
- inner end of metanephridia opens into coelom by ciliated funnel or nephrostome
- other end opens through nephridiopore
- it opens at both ends
- seen in- many polychaetes Nereis, oligochaetes Lumbricus