WELCOME

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DIGESTIVE SYSTEM OF SCOLIODON

The digestive system consists of a] Alimentary canal b] Digestive Glands a] Alimentary canal : It is food passage. It extends from mouth to cloaca.

It is consists of ----

- 1. Mouth
- 2. Buccal Cavity
- 3. Pharynx
- 4. Oesophagus
- 5. Stomach
- 6. Intestine
- 7. Rectum
- 8. Cloaca



Mouth:

The mouth is 'V' shaped and crescentic opening. It consists of upper jaw and lower jaw. It is bounded by fold of skin to form upper lip and lower lip. The mouth is leads into buccal cavity.

Buccal Cavity:

This cavity is large. At the floor of buccal cavity tongue is present. The tongue is formed by the fold of mucous membrane. It is non glandular and non muscular. The jaws are provided by several rows of teeth. The teeth are pointed, triangular and backwardly directed. The teeth are similar; such teeth are called as homodont. The old teeth are replaced by new teeth such teeth are called as polyphydont. The teeth are helps for capturing the prey. They prevent the escape of prey.

Pharynx:

The buccal cavity is leads into pharynx. The pharynx is large. It is food as well as respiratory passage. At the either side of pharynx five internal branchial apertures of gill clefts are present. They are provided by gill racker. The gill rackers prevent the entry of food in to respiratory passage.

The pharynx is provided by mucous membrane.

Oesophagus:

The pharynx is leads in to oesophagus. The oesophagus is narrow short and muscular. It is internally lined with mucous membrane to form longitudinal folds called rugae.

Stomach:

The oesophagus is leads into stomach. The stomach is 'J' shaped. It is consists of cardiac stomach and pyloric stomach. i] Cardiac stomach: It is long broad and proximal limb. It shows prominent longitudinal folds of mucous membrane. At the junction of cardiac stomach and pyloric stomach small outgrowth is present called as blind sac. ii] Pyloric stomach: It is short, narrow and distal limb. At the end of pyloric stomach bursa entiana is present.

It is thick walled and muscular sac like.

Intestine:

The pyloric stomach is leads into intestine.

It is straight and wide tube.

The anterior part is called as duodenum.

It receives bile duct dorsally and pancreatic duct ventrally. The intestine is provided by mucous membrane. The mucous membrane of intestine forms scroll valve. The one end of the scroll valve is attached to the inner wall of intestine.

The end of the scroll valve is rolled up longitudinally.

It is making an anticlockwise spiral of about two and half turns. The scroll valve increases absorptive area.

In the presence of scroll valve the food passes slowly down.

Rectum:

The intestine leads in to rectum. It is short and narrow. The rectum receives rectal gland. It is vascular and branching gland. It secretes excess salts from blood. **Cloaca:**

Rectum opens into cloaca. It is short and terminal chamber. It opens out by cloacal aperture

b] Digestive glands:1. Liver:

It is situated in the abdominal cavity. It is an elongated, bilobed, yellowish coloured gland. In the right lobe of live gall bladder is present. The gall bladder is thin walled and 'V' shaped sac. From gall bladder bile duct is arises. This duct opens dorsally in duodenum. This duct carries bile juice. The liver of shark is rich source of oil and vitamin A and D.

2. Pancreas:

It is compact bilobed gland situated in the limbs of stomach. Pancreas has two lobes called dorsal and ventral lobes The pancreatic duct opens into the intestine ventrally. It carries pancreatic juice. 3. Rectal gland: It opens into rectum dorsally. It discharges fluid into the lumen of the intestine. Its function is unknown. Its secretion serves as a lubricant. 4. Gastric glands: These glands occur in the wall of the stomach. They secrete gastric juice as well as HCl. 5. Intestinal glands: These glands are occurs in the wall of intestine and secrete intestinal juice for the digestion of the food

Food feeding and digestion:

Food:

Scoliodon is carnivorous animal.

It feeds on fishes, rock-crabs, spider - crabs, lobsters, molluscans, and annelids. It also feeds on dead animals

Feeding:

The food is held by jaws and prevent the escape because the pointed triangular and pointed backwardly teeth.

The food is swallowed without mastication and passes into stomach.

Digestion:

The digestion of food is occurs in stomach. The stomach secretes the gastric juice. This juice contains pepsin and HCl. The pepsin converts proteins into peptones. The pyloric stomach and scroll valve have no digestive activity. Pancreas secretes trypsin and trypsinogen, amylopsin and lipase and digest protein, starch and fat respectively. The semi-digested food enters the intestine.

The digested food is absorbed into the blood. The oil and glycogen is stored in the liver.

THANKS

