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| CLASS NOTE |
| COMPARTIVE ANATOMY OF DIGESTIVE TRACT OF VERTEBRATE |
| SAIMOUN KEN MANHAI ,ASSISTANT PROFESSOR , DEPT. OF ZOOLOGY , SILAPATHAR COLLEGE |
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| **5/30/2022** |

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COMPARATIVE ACCOUNT OF DIGESTIVE SYSTEM OF VERTEBRATES

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| Characters | Fish | Amphibia | Reptiles | Aves | Mammalia |
| Major parts of alimentary canal  Mouth opening  Teeth  Functions of teeth  Buccal cavity  Vestibule  Palate  Tongue  Internal nares  Pharynx  Glottis  Oesophagus  Stomach  Intestine  Small intestine  Duodenum  Ileum  Large intestine | Buccal cavity , pharynx , oesophagus , stomach , intestine , cloaca  On ventral side of head. Small, crescentric or semi oval , bound by jaw.  Sharp, similar (homodont)and backwardly directed. teeth present several rows on skin of both jaws. Teeth are modified placoid scales and replaced by new ones (polyphyodont) during life.  Grasping prey  Spacious, dorso-ventrally flattened  Absent  Absent .Skull forms roof of buccal cavity  Small, non muscular , non glandular ,non protrusible , attached at base. Taste buds lacking.  Absent  Buccal cavity merges insensibly into a large posterior pharynx .  Absent since there is no trachea and no lungs .  Short and wide tube with thick muscular wall, longitudinal mucous folds and opening into cardiac stomach with a sphincter or oesophageal valve.  Large muscular ,U-shaped or S-shaped. Clearly divided into a long, broad, proximal cardiac stomach and short, narrow, distal pyloric stomach. Junction of the two marked by a blind sac and sphincter valve. Longitudinal mucous folds well developed in cardiac part.  Short but straight and wide tube not differentiated into small and large intestine.  No external differentiation between duodenum and ileum .  Absent  Not differentiated  Last part of in testine forms a short rectum of narrow diameter, opening in to cloaca | Buccal cavity , pharynx , oesophagus , stomach , intestine , cloaca  On ventral side of head. Small, crescentric or semi oval , bound by jaw.  Sharp, similar (homodont)and backwardly directed. teeth present several rows on skin of both jaws. Teeth are modified placoid scales and replaced by new ones (polyphyodont) during life.  Grasping prey  Spacious, dorso-ventrally flattened  Absent  Absent .Skull forms roof of buccal cavity  Large muscular, sticky .Anterior end attached, posterior end free bifid. Highly protrusible and used for capturing insect prey . covered few taste buds .  Small, two. Open on buccal roof anteriorly , just in front vomerine teeth.  Buccal cavity passes without demarcation into a short pharynx .  Floor carries a median slit-like opening or glottis leading into laryngo-tracheal chamber .  Short, wide, muscular with longitudinal mucous folds highly distensible and not clearly demarcated from pharynx and stomach .  Stomach large, broad, simple, curved , muscular sac, on left side of body cavity. Anterior cardiac and posterior pyloric parts not marked off externally. Blind sac and cardiac valve absent .  Long , coiled and narrow tube differentiated into small and large I ntestine.  Duodenum and ileum well marked .  Straight tube forming “U” with stomach . receives biles and pancreatic ducts. Juice through a common hepatopancreatic duct.  Small and coiled  It forms a short but broad rectum opening into cloaca . | Buccal cavity , pharynx , oesophagus , stomach , intestine , cloaca  Terminal along anterior end of head. Large semi circular , slit like bounded by jaws.  Teeth small, conical, acrodont and pleurodont, found on both jaws in a single row .  Grasping and holding prey  Narrow in front, but broad posteriorly  Absent  Absent in lizard and snakes. A false or pseudopalate present in crocodilians .  Large roughly triangular , muscular, glandular ,attached mid ventrally. Anterior tip free ,bifid and protrusible. covered with fine papillae having taste buds.  Small, two rounded, open near anterior end on roof of buccal cavity.  Buccal cavity merges posteriorly into a broad pharynx .  A median slit-like glottis on floor leads into trachea.  Long, narrow, muscular tube with longitudinal mucous folds. Highly distensible. without crop.  Stomach long, tubular or spindle like, curved muscular tube lying on left side . cardiac and pyloric parts indistinct externally. Longitudinal mucous folds well developed in cardiac part.  Long, coiled narrow and clearly differentiated into small and large intestine.  Duodenum and ileum well marked .  Straight tube receiving separate bile and pancreatic ducts.  Small and coiled  Short and forms an anterior thin walled narrow colon and a posterior thick walled broad rectum opening into cloaca | Buccal cavity , pharynx , oesophagus , stomach , intestine , cloaca  Terminal V –shaped slits with a wide gape, bounded by jaws and horny beak.  Teeth completely absent in both jaws .  Narrow roughly triangular  Absent  Palate incomplete , formed by lateral folds which do not meet mesially  Tongue large , narrow, somewhat triangular attached and non protrusible . covered with fine horny processes with scanty taste buds.  Small, slit like, open rather posteriorly into buccal cavity or pharynx .  Buccal cavity merges behind into pharyngeal cavity .  Floor of pharynx carries an oval glottis with tumid lips .  Long ,wide, muscular, thick-walled and distensible . in front of sternum, its middle part forms a large, bilobed , thin-walled elastic sac, crop or food reservoir.  Stomach small and divided into 2 distinct parts: an anterior narrow ,tube-like glandular proventriculus , and a posterior broad , muscular, biconvex gizzard internally lined by thick , horny epithelium .  Long, coiled, narrow and clearly marked into small and large intestine.  Duodenum and ileum well marked .  U- shaped tube receiving 2 bile ducts and 3 pancreatic ducts, separately .  Long and coiled  Forms a short but broad rectum only which leads into cloaca . | Buccal cavity , pharynx , oesophagus , stomach , intestine , cloaca  Sub terminal , small, Transverse slit ,bounded by jaws .  Teeth of several types (heterodont) with roots in sockets of jaw bones (thecodont) and occur in two sets in life (diphyodont) present on both jaws .  Cutting holding and mastication of food.  Large, spacious.  Mouth opens into a narrow space bounded by jaws, lips and cheeks ,called vestibule .  A secondary palate present forming roof of buccal cavity.  Large ,muscular attached mid ventrally. Groved mid dorsally. Anterior tip free, rounded and protrusible. Covered with 4 kinds of papillae containing taste buds.  Do not open into buccal cavity but much posteriorly in the roof of pharynx.  Pharynx is short, narrow and differentiated into nasopharynx , oropharynx and oryngopharynx .  Floor of laryngopharynx has a median vertical slit-like glottis leading into larynx .  Long, narrow, muscular, elastic tube ,without crop, of uniform diameter, opening into stomach .  Stomach large, bean shaped, lying transversely on left side. distinguished into 3 regions: cardiac, fundic and pyloric .  Long, coiled, narrow and well differentiated into small and large intestine.  Duodenum and ileum well marked .  Distinct U-shaped loop receiving 1 bile and pancreatic duct.  Extremely long and coiled .  Very long and forms an anterior sacculated colon and a posterior beaded rectum. |