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10

## ORAL GLANDS

Terrestrial tetrapods have a variety of multicellular glands that secrete watery or viscous fluids into the oral cavity. The chief ingredient is usually mucus of varying viscosities and chemical composition. It moistens the food and lubricates dry food for passage through the pharynx and oesophagus. It moistens the taste buds also. Secretions include serous fluids, toxins, venoms and enzymes. Labial glands open into the vestibule at the base of the teeth and secrete mucus which lubricates the food. The duct of the parotid gland called Stenson's duct also opens into the vestibules.

Salivary glands open into the oral cavity proper. According to their location oral glands are often named as Labial glands (open at the base of the lips) Palatal glands (open into the palate) Intermaxillary (internasal) gland, (lie between the premaxillary bones) Lingual glands (lie under the tongue) Parotid gland (open into vestibule opposite one of the upper molars) Molar gland (present under the skin of lower lip, open via several ducts into mucosa of cheek)

In Cyclostomes, salivary gland opens into the mouth cavity on either side just below the tongue. The glands secrete an anticoagulant called lamphedrin.

Fishes and Amphibians that spend their entire life in the water, have no glands other than simple mucous cells opening into the mouth cavity. In terrestrial amphibians a mucous gland called the intermaxillary gland lies in the nasal septum. It is larger in anurans than in urodeles (the secretion of this gland helps to give the tongue its adhesive properties). The gland is lacking in caecilians. Pharyngeal gland is present in frogs and toads. Mucous lingual glands are numerous on the protrusible tongues of frogs, toads and certain salamanders. Their secretion aids in the capture of prey.

In Reptiles, a palatine gland is present which is homologous with the intermaxillary gland of Amphibians. In Addition, Lingual, sublingual and labial glands are present. In poisonous snakes, the gland which secretes the venom is a modified labial gland in the upper jaw. It may be homologous with the parotid salivary gland of mammals. In Gila monster the sublingual gland is modified to form the poisonous secretion. In marine turtles, crocodiles and alligators oral glands are poorly developed.

Birds have well developed anterior and posterior sublingual glands opening in the floor of the mouth. An angle gland, possibly homologous with the labial glands of reptiles lies at the angle of the mouth. Labial and intermaxillary glands are missing. Numerous groups of small glands with digestive functions open separately on the roof of the mouth.

Many small mucous glands are located on the palate and tongue in mammals. Three sets of salivary glands – parotid gland, submandibular or submaxillary gland and sublingual

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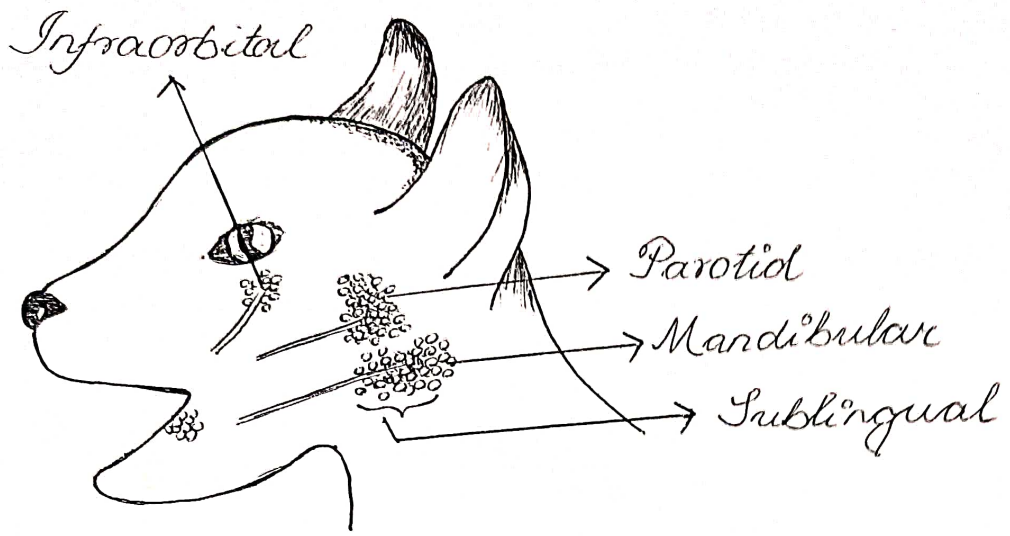


Fig:- Oral gland of cat

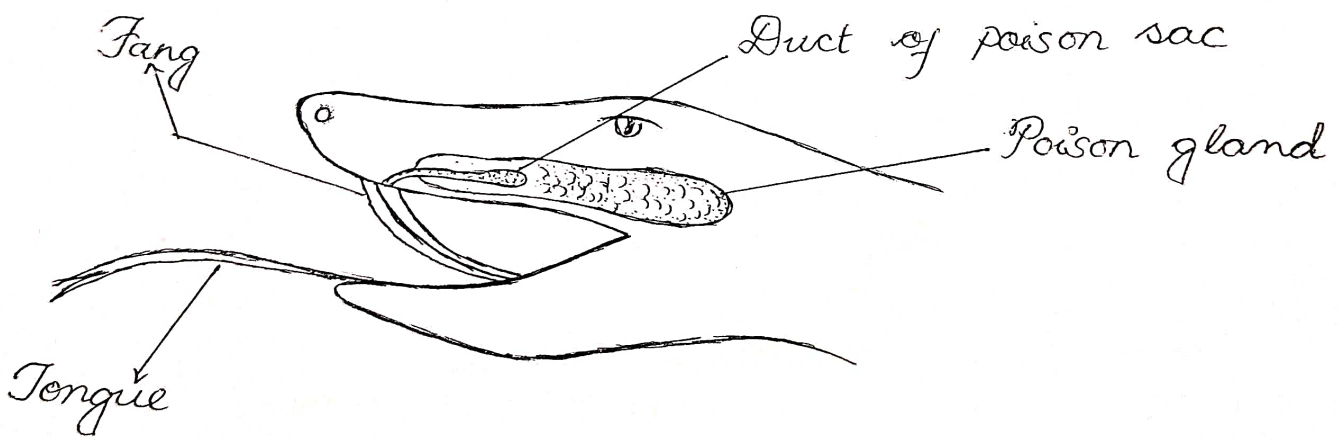


Fig:- Snake

gland are present. The parotid gland lies beneath and anterior to the external auditory meatus. The submandibular lies in the posterior part of the lower jaw. Its duct opens in front of the tongue near the lower incisor teeth. Rabbits and horses lack the submandibular gland. The sublingual gland is composed of gland proper with its duct and numerous smaller elements each with its own duct. The sublingual gland is not present in the mouse, mole or shrew.

Salivary glands are reduced or wanting in Whales and Sirenians. In man, the submandibular and sublingual glands produce most of the mucin in the saliva.

Mucous molar glands are well developed in herbivorous forms like Artiodactyla. Their secretion aids in swallowing the coarse vegetation on which these animals feed. The large orbital glands of the dog family are also mucous glands when ducts open in the region of the last molar teeth.