

DIGESTIVE SYSTEM - SALIVARY GLANDS

Turn the fetal pig on its side. Carefully cut through the skin along the side of the head between the ear and the mouth, as in the accompanying photo. Separate the skin from the underlying tissues and remove it. The *platysma* and other muscles associated with the skin are also removed. Expose the salivary glands and ducts. This is to be done very carefully, since the structures to be studied lie right below the skin.

In the cheek area note the thick *masseter muscle*. This is the major muscle used in chewing. It originates upon the zygomatic arch (cheek bone), and inserts upon the mandible. When it contracts, it brings the jaws together.

Parotid Gland — This is the largest of the salivary glands. It lies ventral to the pinna (external ear) and is recognized by its triangular shape and lobular texture. The *parotid duct*, or *Stensen's duct*, can be seen emerging from the antero-ventral edge of the gland by several roots. It then crosses the lower portion of the *masseter muscle* of the cheek, following the course of the prominent *external maxillary vein*. It continues to the mouth and opens opposite the upper fourth molar. You can find the opening by looking inside the cheek and tugging lightly on the duct with forceps.

Note: do not confuse the branches of the *facial nerve* leading to the facial muscles with the parotid duct. The *dorsal buccal branch* and the *ventral buccal branch* of the facial nerve also cross the masseter muscle from beneath the edges of the parotid gland. The parotid duct is generally thicker than the nerve branches. The relationship between the nerve and the parotid duct can clearly be seen in the photo.

Small *buccal glands* lie beneath the skin of the lips.

Submaxillary Gland (Mandibular Gland) — Most of this gland lies beneath and ventral to the parotid gland just posterior to the angle of the jaw. It is small and oval in shape. Separate the two glands. Its duct, *Wharton's duct*, is hard to trace since it passes amongst some of the jaw muscles. It extends to the angle of the jaw, passes to the floor of the mouth, to the antero-ventral connection of the tongue. At this point it opens into the mouth.

Sublingual Gland — This is the third salivary gland. It is hidden in the third salivary photo. It is flat and narrow and lies along the duct of the submaxillary gland. Its duct parallels that of the submaxillary and both open under the tongue, along its side.