

DEPARTMENT OF ORAL AND MAXILLOFACIAL PATHOLOGY & ORAL

# MAXILLARY CANINE

# INTRODUCTION

# CHRONOLOGY

First evidence of calcification	4 to 5 months
Enamel completed	6 to 7 years
Eruption	11 to 12 years
Root completed	13 to 15 years

# MEASUREMENT TABLE

Cervicoincisal length of crown	10.0mm
Length of root	17.0mm
Mesiodistal diameter of crown	7.5mm
Mesiodistal diameter of crown at cervix	5.5mm
Labiolingual diameter of crown	8.0mm
Labiolingual diameter at cervix	7.0mm
Curvature of cervical line mesially	2.5mm
Curvature of cervical line distally	1.5mm

- The outline of the labial or lingual aspect of the maxillary canine is a series of curves or arcs except for the angle made by the tip of the cusp. This cusp has a mesial incisal ridge and the distoincisal ridge.

The mesial half of the crown makes contact with the lateral incisor, and the distal half contacts the first premolar. Therefore the contact areas of maxillary canine are at different levels cervicoincisally.

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This tooth seems to be a compromise in the change from anterior to posterior teeth in the dental arch.

It is apparent that the construction of this tooth has reinforcement, labiolingually, to offset directional lines of force brought against it when in use.

The incision portion is thicker labiolingually than that of either the maxillary central or the lateral incisor.

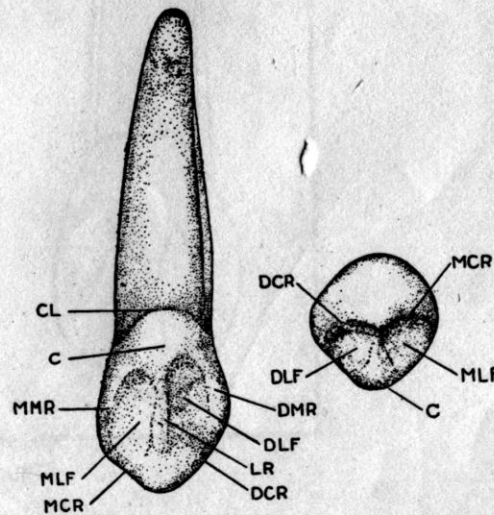
The Labiolingual measurement of the crown is about 1mm greater than that of the maxillary central incisor.

The mesiodistal measurement is approximately 1mm less.

The cingulum shows greater development than that of central incisor.

- The root of the maxillary canine is usually the longest of any root with the possible exception of that of the mandibular canine, which may be as long at times.
- The root is thick labiolingually, with developmental depressions mesial and distally that help to furnish the secure encourage this tooth has in the maxilla.

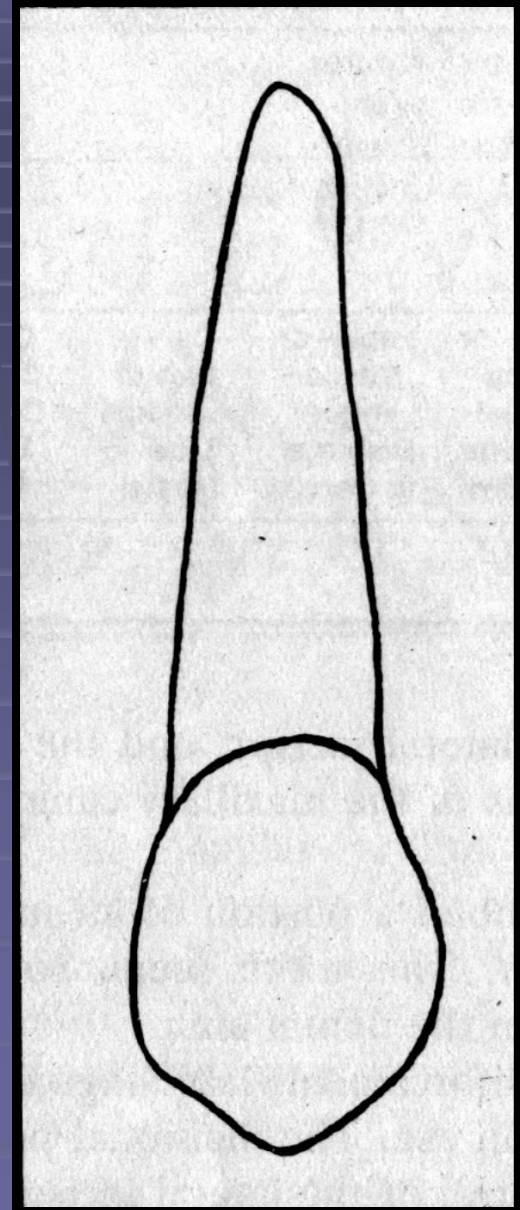
**Figure 8-1.** Maxillary right canine, lingual and incisal aspects. *CL*, Cervical line; *C*, cingulum; *MMR*, mesial marginal ridge; *MLF*, mesiolingual fossa; *MCR*, mesial cusp ridge; *DCR*, distal cusp ridge; *LR*, lingual ridge; *DLF*, distolingual fossa; *DMR*, distal marginal ridge.



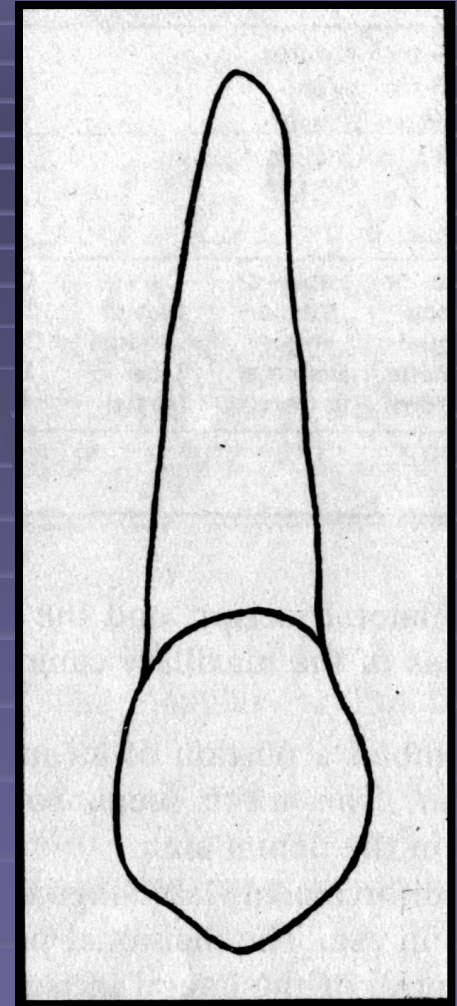
# DETAILED DISCRPTION OF MAXILLARY CANINE FROM ALL ASPECTS

# LABIAL ASPECT

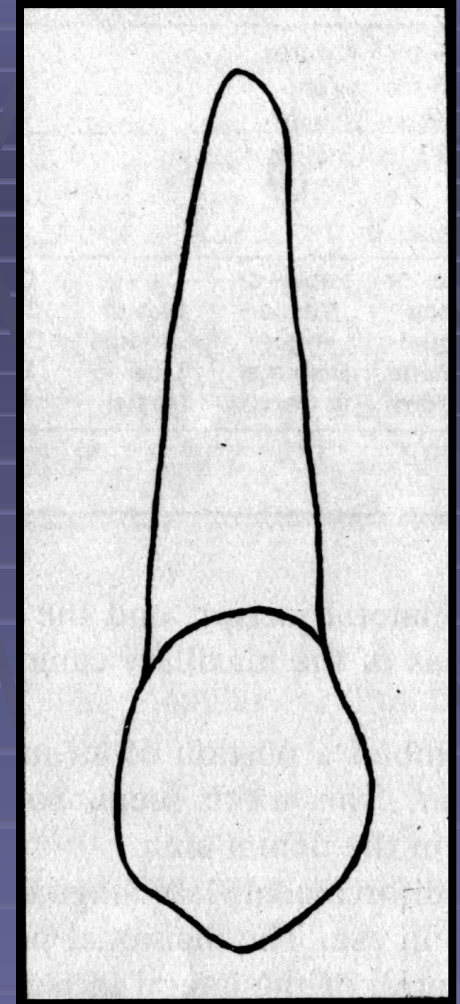
- The crown and the root are narrower mesiodistally than those of maxillary central incisor. The difference is about 1mm in most mouths.
- The cervical line Labially is convex, with the convexity towards the root portion.



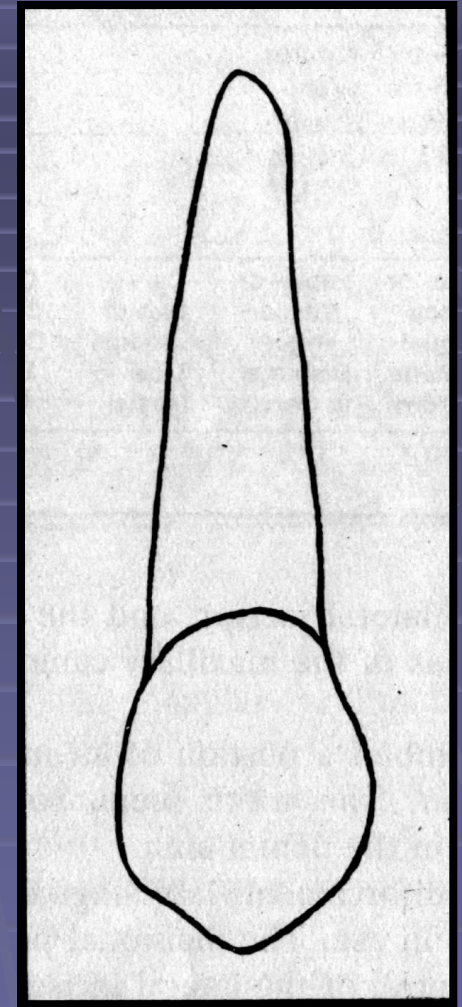
- Mesially the outline of the crown may be convex from the cervix to center of the mesial contact area or the crown may exhibit a slight concavity above the contact area from the labial aspect.
- The center of the contact area mesially is approximately at the junction of the middle and the incisal third of the crown.



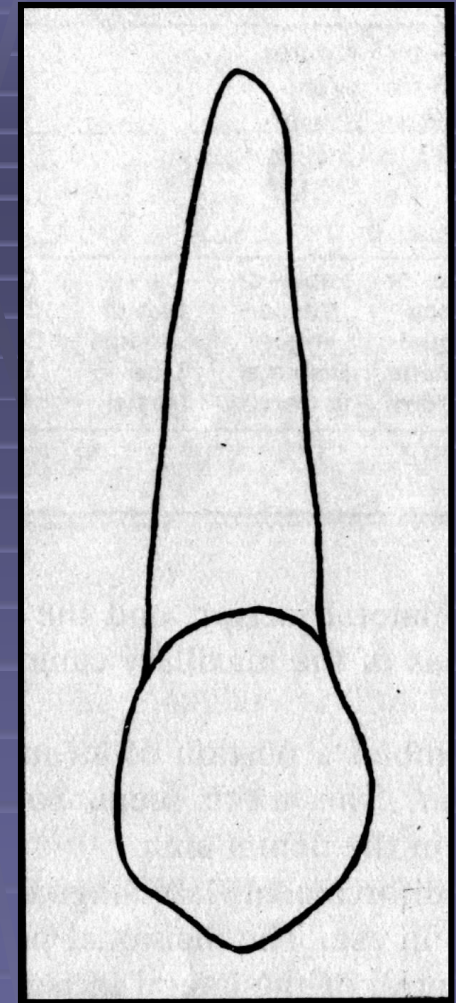
- Distally the outline of the crown is usually concave between the cervical line and the distal contact area. The distal contact area is usually at the center of the middle third of the crown.
- Unless the crown has been worn unevenly, the cusp tip is on a line with the center of the root.



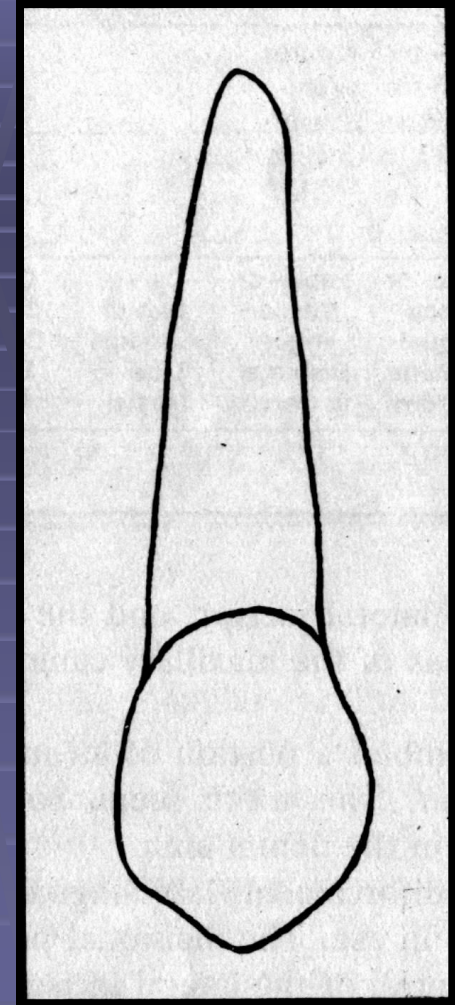
- The cusp has a mesial slope and a distal slope, the mesial slope being the shorter of the two. Both slopes show a tendency toward concavity before wear has taken. These depressions are developmental in character.
- The labial surface of the crown is smooth with no developmental line of note except shallow depressions mesially and distally, dividing the 3 labial lobes.



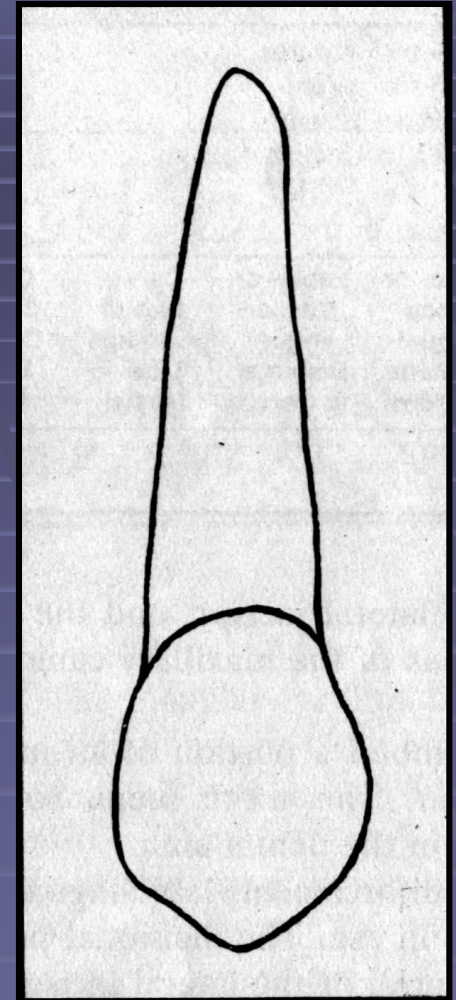
- The middle labial lobes shows much greater development than other lobes. This produces a ridge on the labial surface of the crown.
- A line drawn over the crest of this ridge, from the cervical line to the tip of the cusp, is the curved one inclined mesially at its center.



- All areas mesial to the contrast of this ridge exhibit convexity except for insignificant developmental line in the enamel distally to the labial ridge, there is a tendency toward concavity at the cervical third of the crown, although convexity is noted elsewhere and all areas approaching the labial ridge.

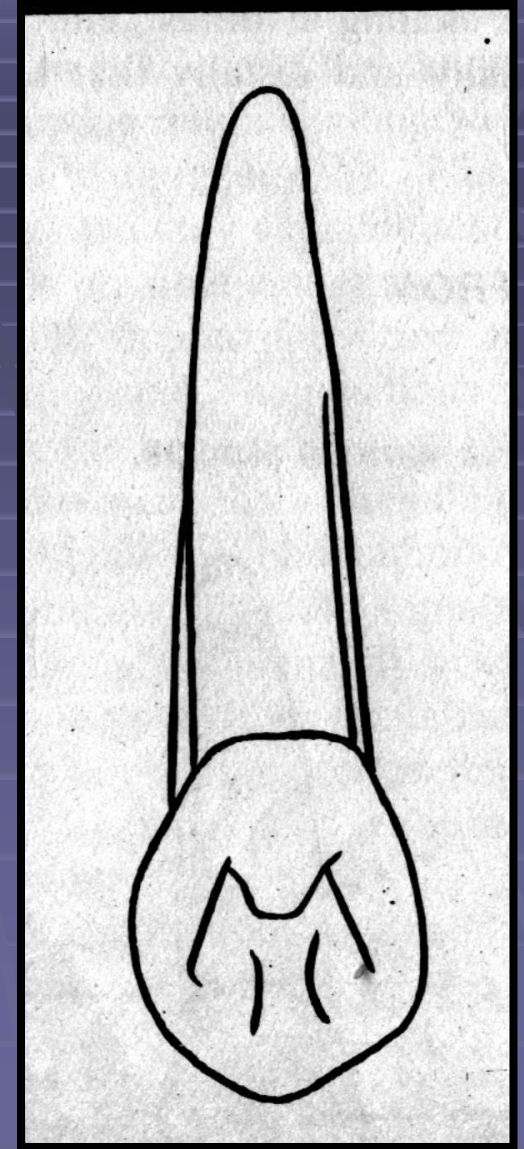


- The root of the maxillary canine appears slender from the labial aspect when compared to the bulk of the crown, it is conical in form with a bluntly pointed apex.
- It is not uncommon for this root to have a sharp curve in the vicinity of the apical third.
- This curvature may be in a mesial or distal direction, in most instances the latter.
- The labial surface of the root is smooth and convex at all points.

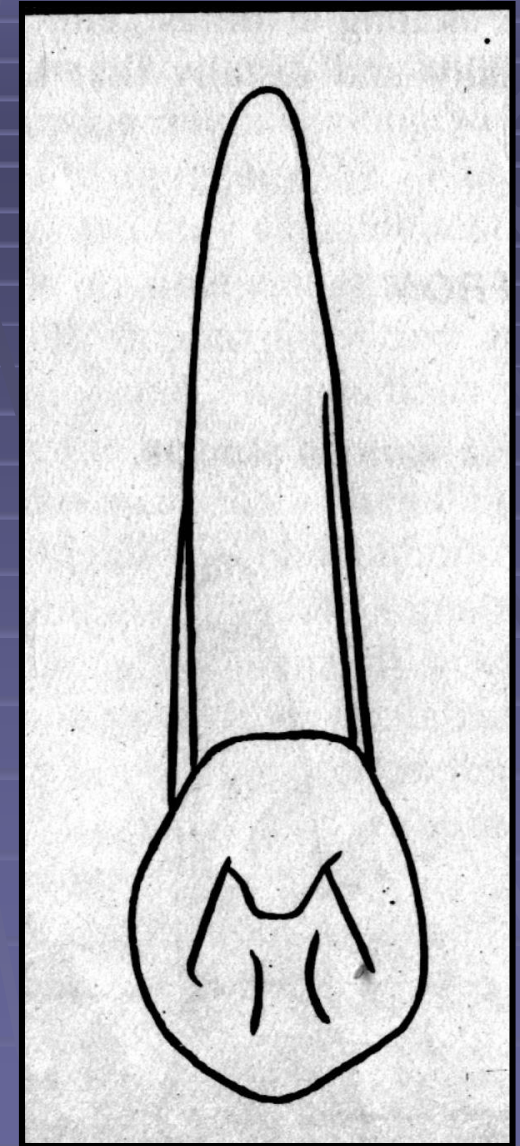


# LINGUAL ASPECT

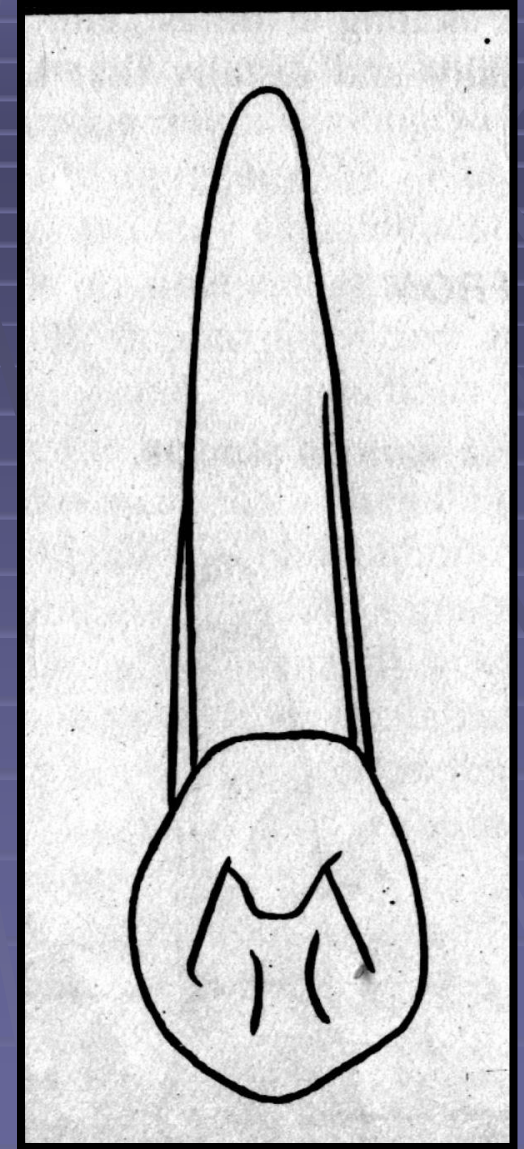
- The crown and root are narrower lingually than Labially.
- The cervical line from this aspect differs somewhat from the curvature found Labially.
- The cervical line shows a more even curvature. The line may be straight for a short interval at this point
- The cingulum is large and in some instances is pointed like a small cusp. In the latter types definite ridges are found on the lingual surface of the crown below the cingulum and between strongly developed marginal ridges.



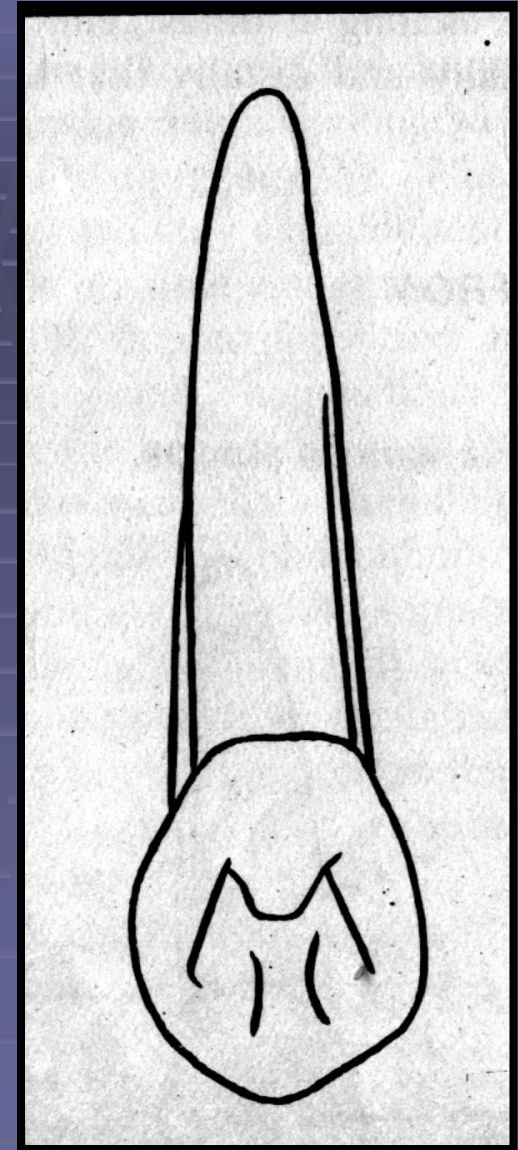
- All the depressions are to be found between these ridge forms, there are seldom any deep developmental grooves.
- Occasionally a well developed lingual ridge is seen which is confluent with the cusp tip, this extends to a point near to cingulum. There may be shallow concavity between this ridge and marginal ridges. When these concavities are present, they are called mesial and distal lingual fossae.



- Sometimes the lingual surface of canine crown is so smooth that fossae or minor ridges are difficult to distinguish. There is tendency toward concavities; however where the
- fossa are usually found and heavy marginal ridges with a well formed cingulum are to be expected. The smooth cingulum, marginal ridges and lingual portion of the incisal ridges are usually confluent, with little evidence of developmental grooves.

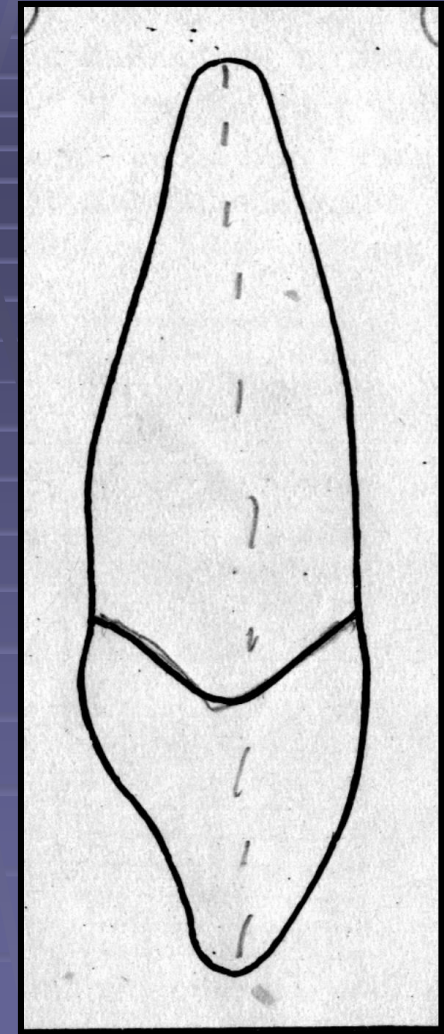


- The lingual portion of the root of the maxillary canine is narrower than the labial portion. Because of this formation, much of the mesial and distal surface of the root is visible from the lingual aspect.
- Developmental depressions mesial and distally may be seen on most of these roots, extending most of the root length. The lingual ridge of the root is rather narrower, but it is smooth and convex at all points from the cervical line to the apical end.

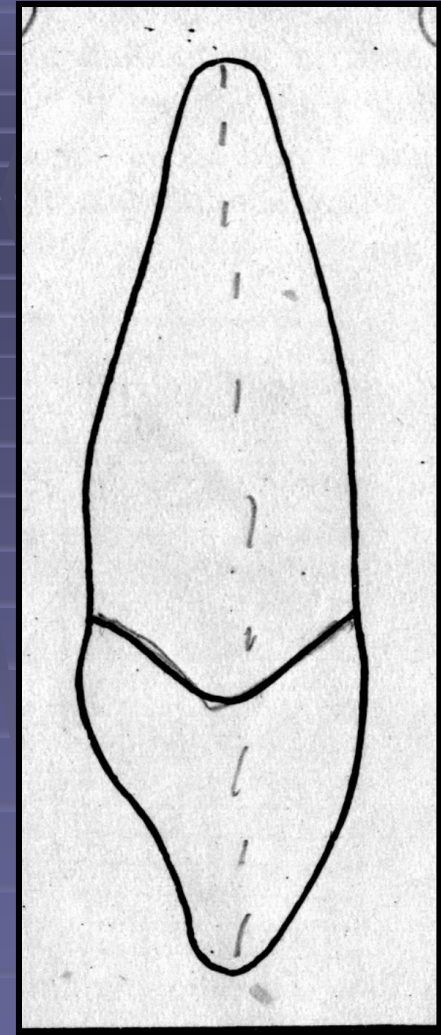


## MESIAL ASPECT

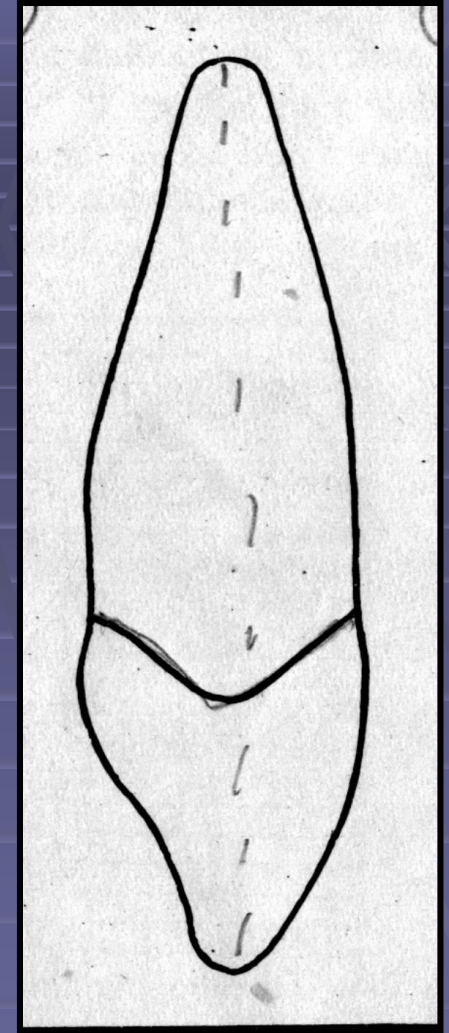
- The mesial aspect of maxillary canine presents the outline of the functional form of an anterior tooth .it shows greater bulk generally, however, and greater Labiolingual measurement than any of the other anterior teeth.



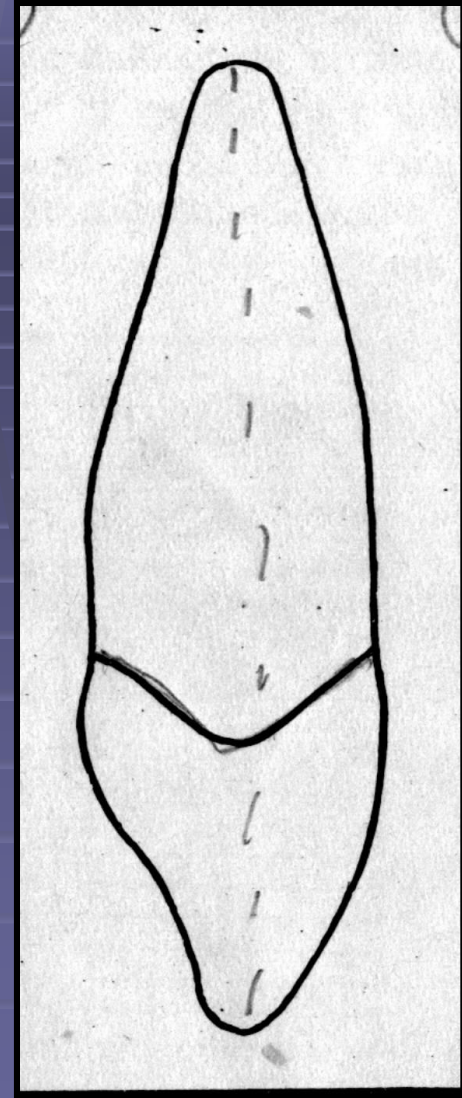
- The outline of the crown is wedge shaped, the greatest measurement being at the cervical third and the wedge point being represented by the tip of cusp.



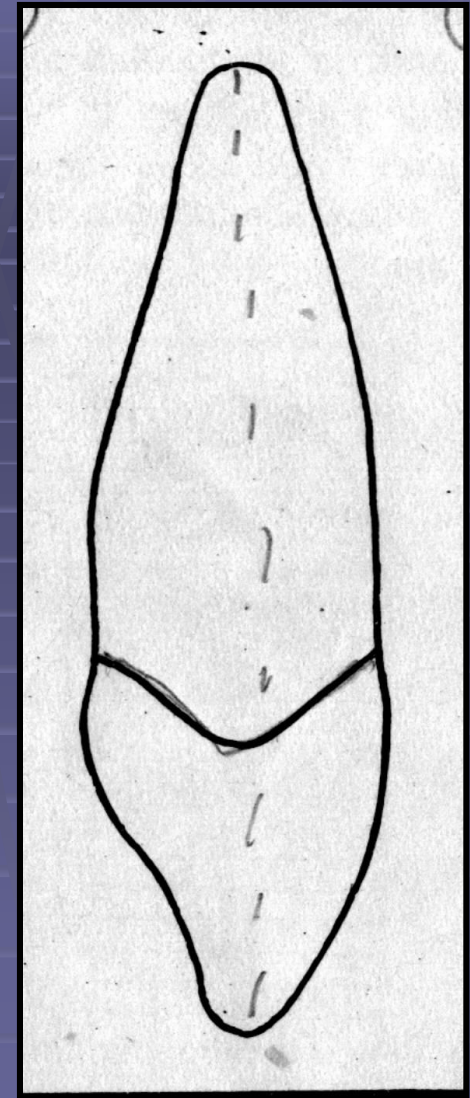
- The curvature of the crown below the cervical line Labially and lingually corresponds in extent to the curvature of the maxillary central and Lateral Incisor .nevertheless, the crest of that curvature is found at a level more incisal, since the middle labial and lingual lobes are more highly developed.
- Many canines show a flattened area Labially at the cervical third of the crown, which appears as a straight outline from the mesial aspect.



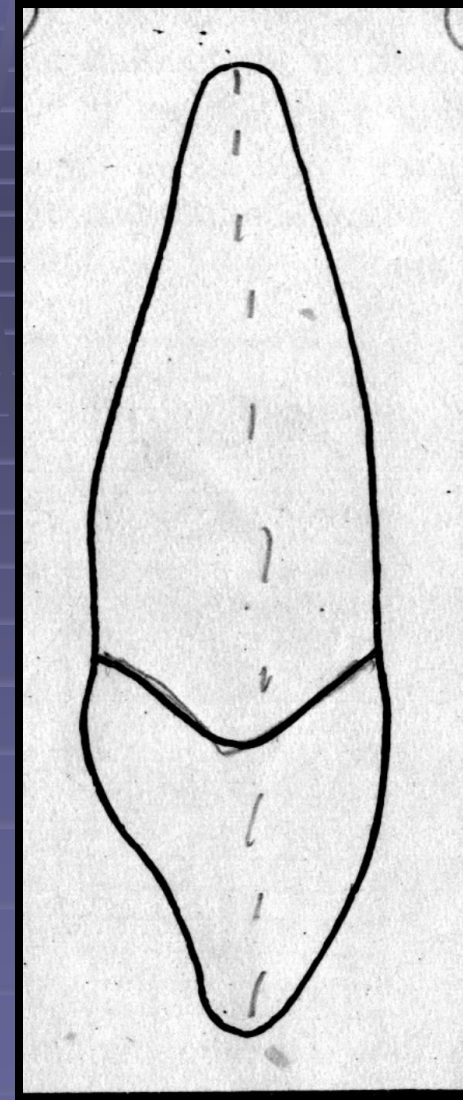
- Below the cervical third of the crown ,the labial face may be presented by a line only slightly convex from the crest of curvature at the cervical third to the tip of the cusp .tip line usually becomes straighter as it approaches the cusp.



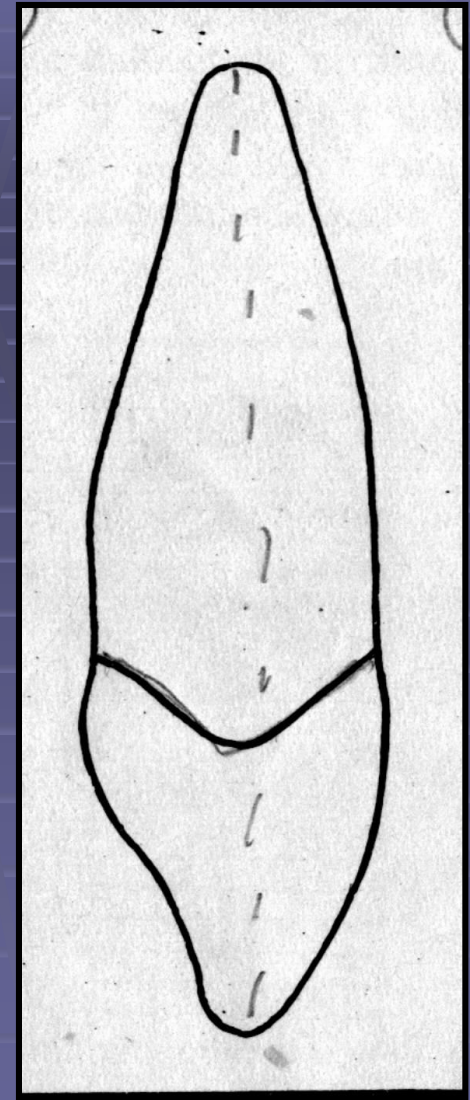
- The entire labial outline from the mesial aspect exhibits more convexity from the cervical line to the cusp tip than the maxillary central incisor does from the cervix to incisal edge.



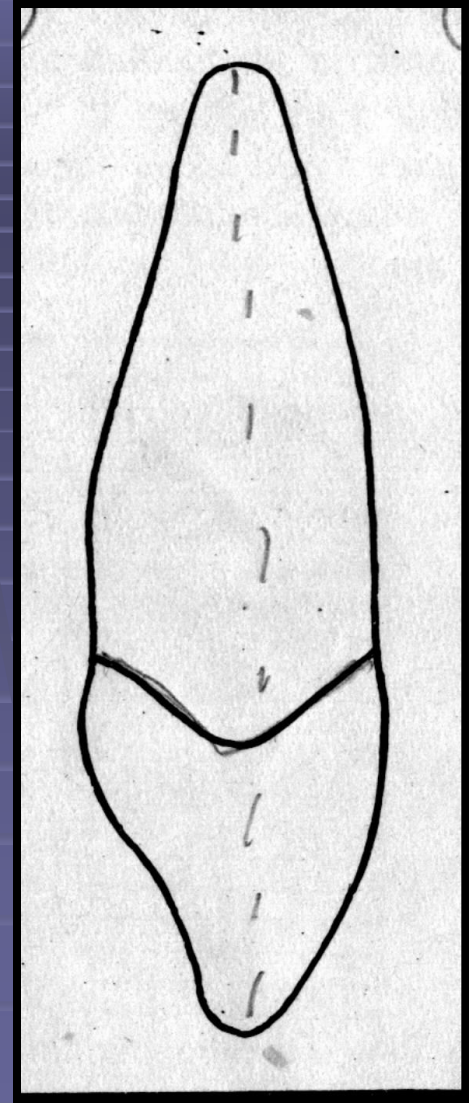
- The lingual outline of the crown from the mesial aspect may be represented by a convex line describing the cingulum, which convexity straightens out as the middle third is reached, becoming convex again in the incisal third.
- The cervical line which outlines the base of the crown from this aspect curves towards the cusp, on the average, approx 2.5 mm [cemento enamel junction]



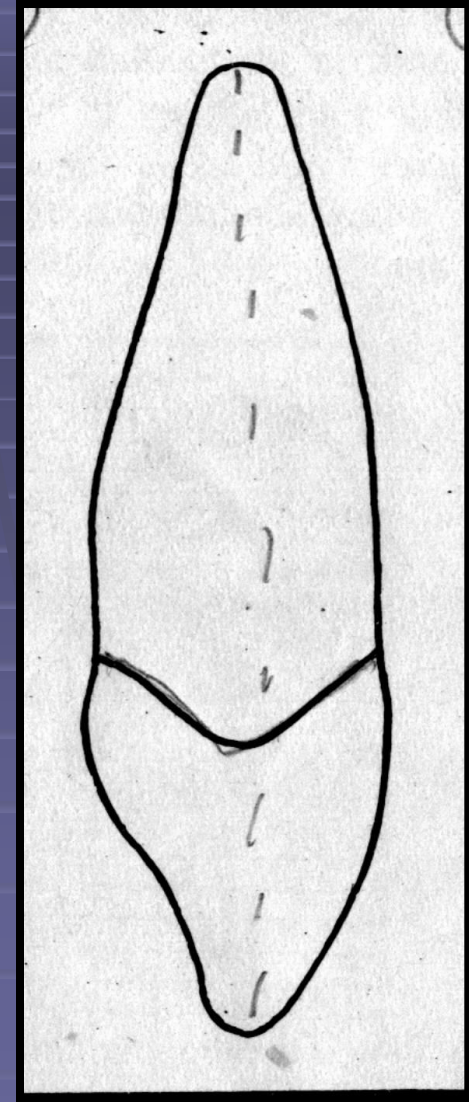
- The outline of the root from this aspect is conical, with a tapered or bluntly pointed apex. The root may curve Labially toward the apical third. The labial outline of the root may be almost perpendicular, with most of the taper appearing on the lingual side.
- The position of the tip of the cusp in relation to the long axis of the root is different from that of maxillary central and Lateral incisors.



- . A line bisecting the cusp is labial to the line bisecting the root. Lines bisecting the roots of central and lateral incisors also bisect the incisal ridges.
- The mesial surfaces of the canine crown presents convexities at all points expect for a small circumscribed area above the contact area, where the surface is concave and flat between that area and cervical line.

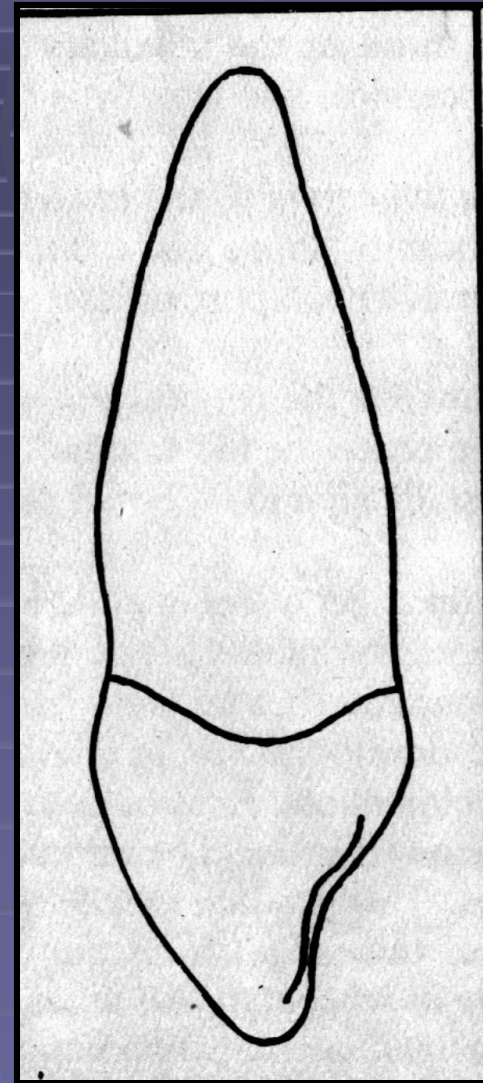


- The mesial surface of the root appears broad, with a shallow developmental depression for part of the root length.
- Developmental depressions on the heavy roots help to anchor the teeth in the alveoli and help to prevent rotation and displacement.

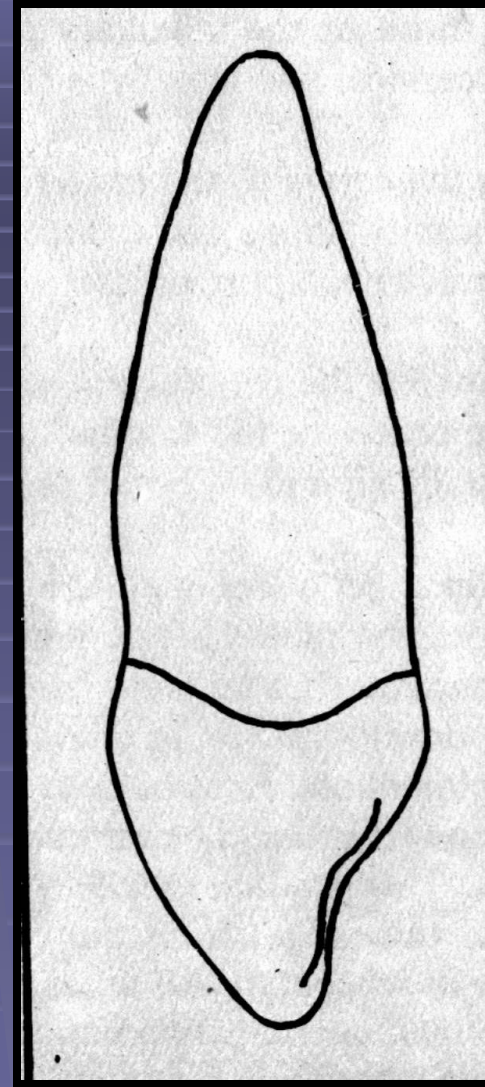


# DISTAL ASPECT

- The distal aspect of the maxillary canine shows somewhat the same form as mesial aspect, with the following variations: the cervical line exhibits less curvature towards the cusp ridge;

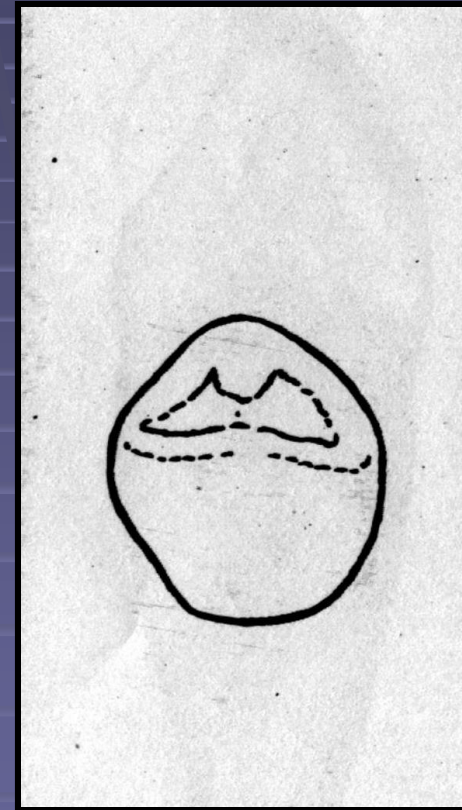


- the distal marginal ridge is heavier and more irregular in outline ; the surface displays more concavity usually above the contact area, and the developmental depression on the distal side of the root is more pronounced.

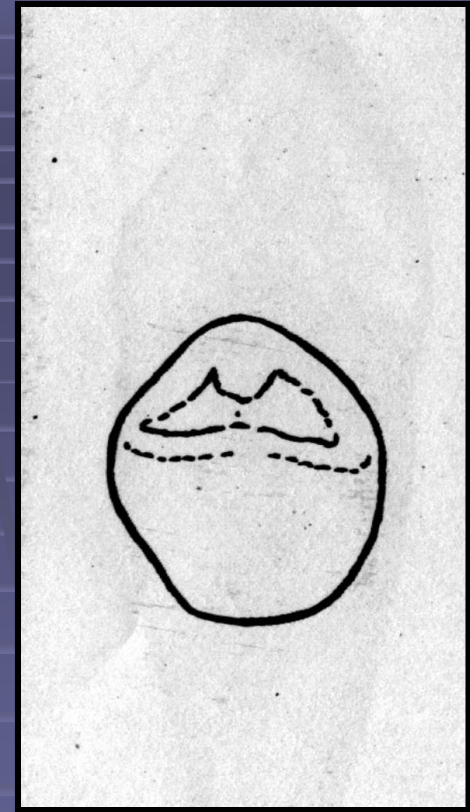


# INCISAL ASPECT

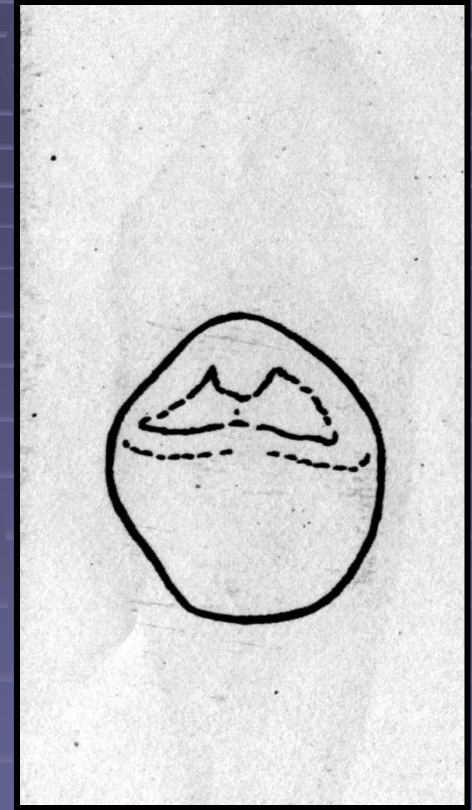
- The incisal aspect of the maxillary canine emphasizes the proportions of the tooth mesiodistally and labiolingually in general, the Labiolingual dimension is greater than mesiodistal. Occasionally, the two measurements are about equal. Other instances appear with the crown larger than usual in a Labiolingual direction.



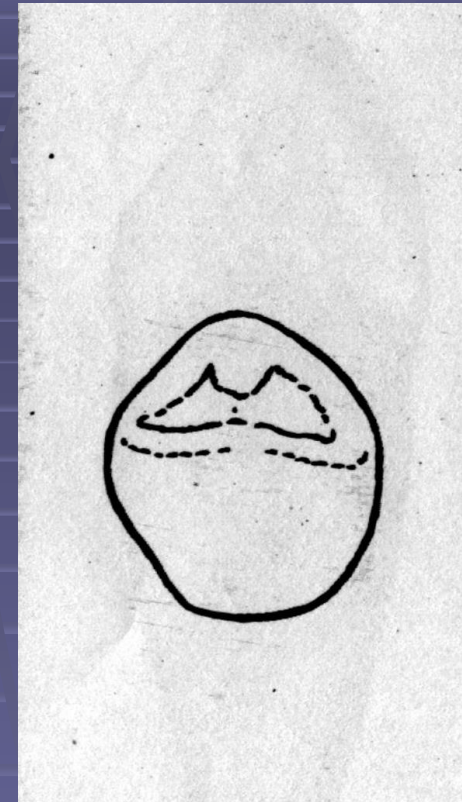
- From the incisal aspect if the tooth is correctly posed so that the long axis of the root is directly in the line of vision, the tip of the cusp is labial to the center of the crown labiolingually and mesial to the center mesiodistally.



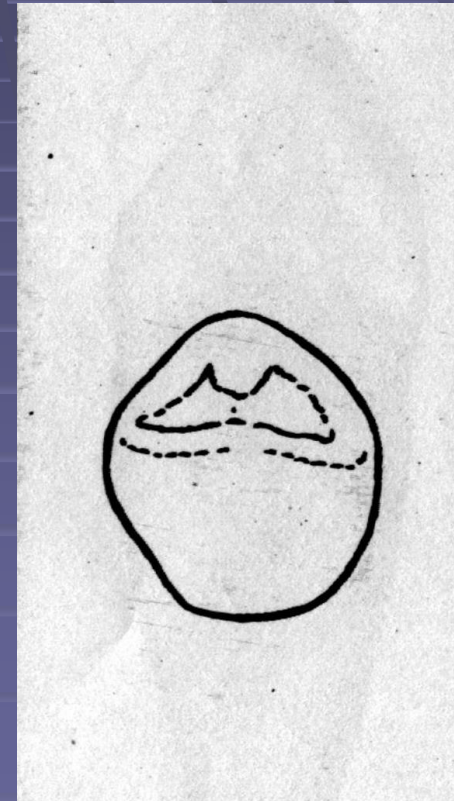
- If the tooth were to be sectioned labiolingually beginning at the center of the cusp of the crown, the 2 sections would show the root rather evenly bisected, with the mesial portion carrying a narrower portion of the crown mesiodistally than that carried by the distal section of the tooth.
- Nevertheless, the mesial section shows a crown portion with greater Labiolingual bulk. The crown of this tooth gives the impression of having all of the distal portion stretched to make contact with the first premolar.



- The ridge of the middle labial lobe is very noticeable Labially from the incisal aspect. It attains its greatest convexity at the cervical third of the crown, becoming broader and flatter at the middle and incisal third.



- The cingulum development makes up the cervical third of the crown lingually. The outline of the cingulum may be described by a shorter arc than the one Labially from this aspect.
- This comparison coincides with the relative mesiodistal dimensions of the root lingually and Labially.



- A line bisecting the cusp and cusp ridges drawn in the mesiodistal direction is almost always straight and bisects the short arcs representative of the mesial and distal contact areas.
- This fact emphasizes the close relation between maxillary canines and some lateral incisors since they resemble each other in this characteristic.
- Naturally the lateral incisors that resemble canines are relatively wide labiolingually and those resembling central incisors are narrower in that direction.

