

Supplemental Document 1: Dental terminology

Here, we focus our most detailed observations on the occlusal surface of the crown. This surface is complicated by peaks (cusps) and ridges (or crests) that interface, or occlude, with surfaces of the teeth in the opposing jaw (Avery, 2002; Nanci, 2007; Schwartz, 2007). Terminology referring to the cusps, crests, and depressions of the occlusal surface of teeth is specific to maxillary and mandibular teeth (here, we follow terminology of Swindler, 2002). Primary cusps of maxillary teeth end in the suffix “-cone;” for mandibular teeth the suffix “-conid” is used. Secondary cusps end with the suffix -conules for maxillary teeth and -conulids for mandibular teeth. The crown crests, which may bridge the distance between cusps, are referred to as “-cristae” for maxillary teeth and “-cristids” for mandibular teeth. A band of enamel may form a ledge around the perimeter of the crown: in maxillary teeth this is a cingulum, while in mandibular teeth this is a cingulid. These may form structures that resemble cusps, styles (maxillary) or stylids (mandibular), but are usually not as prominent as primary cusps (Swindler, 2002). However, an expansion of a cingulum may develop robustly into a cusp, as is the case with the hypocone of upper deciduous premolars or permanent molar.

In all teeth, regardless of tooth class, at least one cusp is located on the buccal side. In the maxillary teeth this cusp is the paracone; in mandibular teeth this is the protoconid. Overall, our knowledge of primate deciduous tooth crown morphology to date is rather “hominoid-centric,” in that the most plentiful existing descriptions of deciduous dentition bears on apes and humans (e.g., Kraus and Jordan, 1965; Swartz, 1988; Swindler, 2002). The morphology of hominoid teeth informs the way we describe teeth in other primates. For example, hominoid maxillary incisors are spatulate: convex labially, concave lingually, with a relatively flat or rounded incisal margin rather than a pointed cusp apex. Teeth bearing this form are *incisiform*. But it is known, based on rarer descriptions of non-hominoid primates (e.g., Tattersall and Schwartz, 1974; Hershkovitz, 1977), that deciduous incisors (especially di2) may have pointed apices similar to cusps of canine teeth. Such incisors are *caniniform*. As tooth crowns become complicated by additional cusps and crests, they become increasingly *molariform*. The additional cusps in molariform teeth are also named according to terminology in Swindler (2002). Additional cusps for maxillary teeth may include protocone and metacone, and in some cases a hypocone. Mandibular teeth may possess additional cusps including the metaconid, hypoconid,

and entoconid. The presence of additional cusps, the hypoconulid, and the rarer (among primates) paraconid are less consistent. Secondary cusps are identified when present in individual species descriptions (see below).

The crests form boundaries of basins. The trigon basin is a depression between the paracone, protocone, and metacone in maxillary dp4 or M1. Mandibular molarized teeth have two basins, separated by a crest between the protoconid and metaconid (the protocristid). The trigonid basin is the more mesial basin; the talonid basin is distal to the protocristid.