APPENDIX 1.2

Coded utilitarian ichthyolith identification system step 2. To determine the "**features on the upper crown surface**" of the ichthyolith, select one or more characters from the list below.^{2,31}

- **b.** Features on the upper crown surface (within or on the outline and excluding the tooth base or scale base/pedicle)^{2, 19, 31, 32}
 - 0. indeterminate
 - 1. none of the following $^{2, 8, 9, 19, 31}$
 - 2. parallel or subparallel lines, ridges, and (or) keels; which if they radiate, radiate from an edge or from a point on the margin ^{2, 8, 9, 19, 31}
 - 3. lines or ridges radiating from approximate centre of crown ^{2, 8, 9, 19, 31}
 - in an elliptical or subcircular form, one single or double, straight or arcuate line or ridge across greatest dimension ^{2, 8, 9, 19}
 - 5. in triangular forms, a transverse line (the transverse line is the nearest line to the base that extends at least from one side of the inline to the other; and may extend to one or both outline margins); frequently the transverse line separates the tooth crown from the tooth base ^{2, 8, 9, 19}
 - 6. a distinct curved or undulating line or ridge approximately parallel to a curved, undulating or dentate edge ^{2, 8, 9, 19, 31}
 - 7. one median line, ridge, or keel $^{2, 8, 9, 19, 32}$
 - in triangular forms, a flanged occlusal crest that forms a cutting edge on two margins of tooth; it extends from tooth crown apex to its base on both margins ³²
 - 9. concentric lines ^{9, 19}



- 10. pores, pitted, stippled or nodular surface, or central depression ^{19, 22, 32}
- 11. granular surface ³¹
- 12. short or long irregular lines or ridges, may bifurcate basally ³²









13. scalloped texture ³²