

How accurate are field-based estimates of the age of wild dogs?

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Background

Wildlife managers and researchers often need to know the age of wild dogs for various reasons. Field estimates of age, based on a range of unspecified physical characteristics, are used as indicators of age but how accurate are they? This paper reports the age of wild dogs as estimated by experienced trappers to their age as calculated from x-rays of their teeth.

Methodology

Study samples and collection data including estimated age, came from professional trappers from New South Wales, Queensland and Western Australia. Upper canine teeth were removed and later, pulp cavity: tooth width (PC:TW) ratios were calculated using the methodology of Kershaw et al. 2005 derived from known-age samples. The PC:TW calculated age was compared against the age estimates by the trapper in the field.

Results

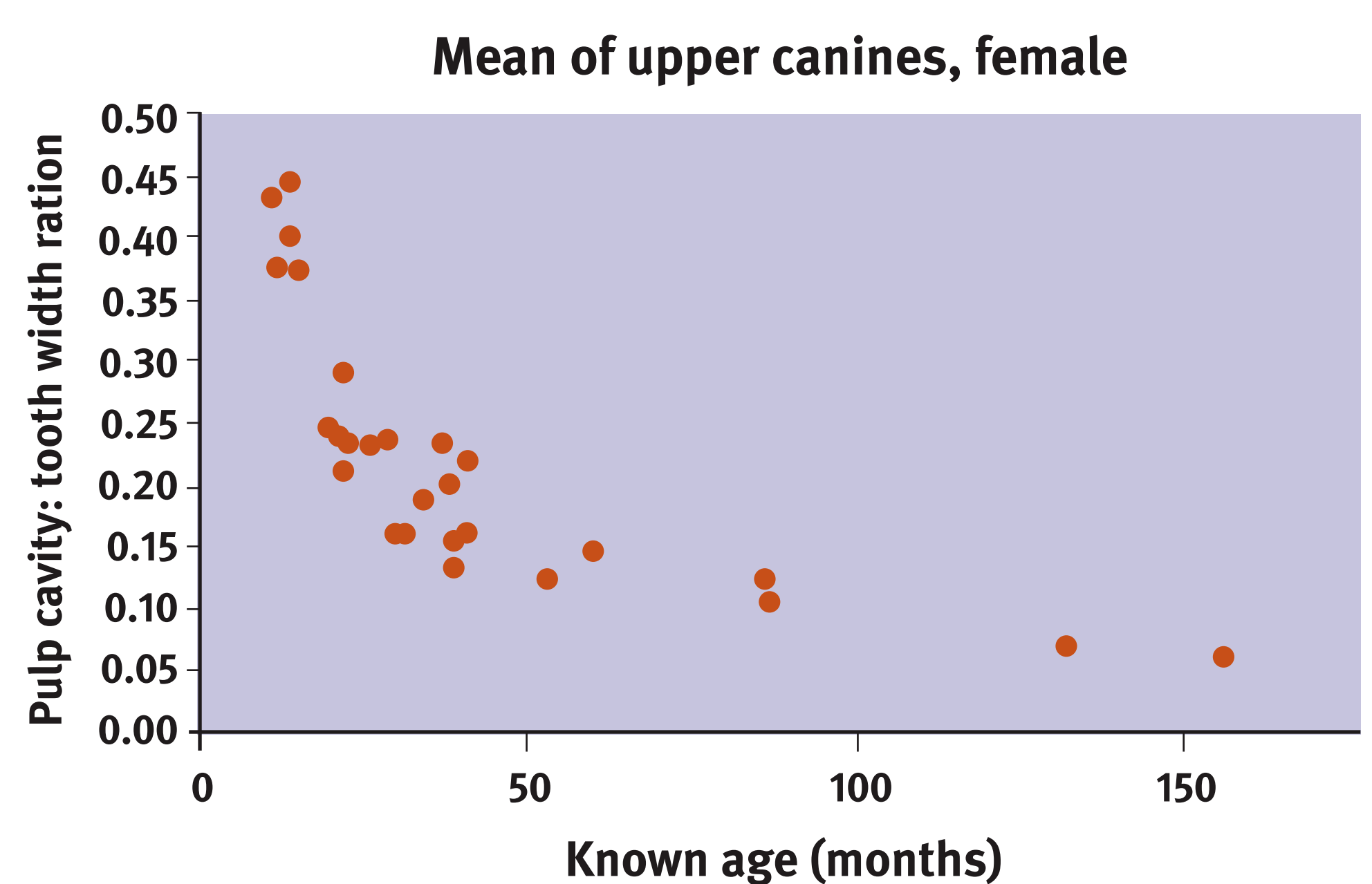
Based on PC:TW ratio calculations of their age, 93.7% of the ages of wild dogs were overestimated by trappers.

Field estimates of age were biased by gender and weight – males and heavier animals over-estimated with greater bias than females and lighter animals of identical age.

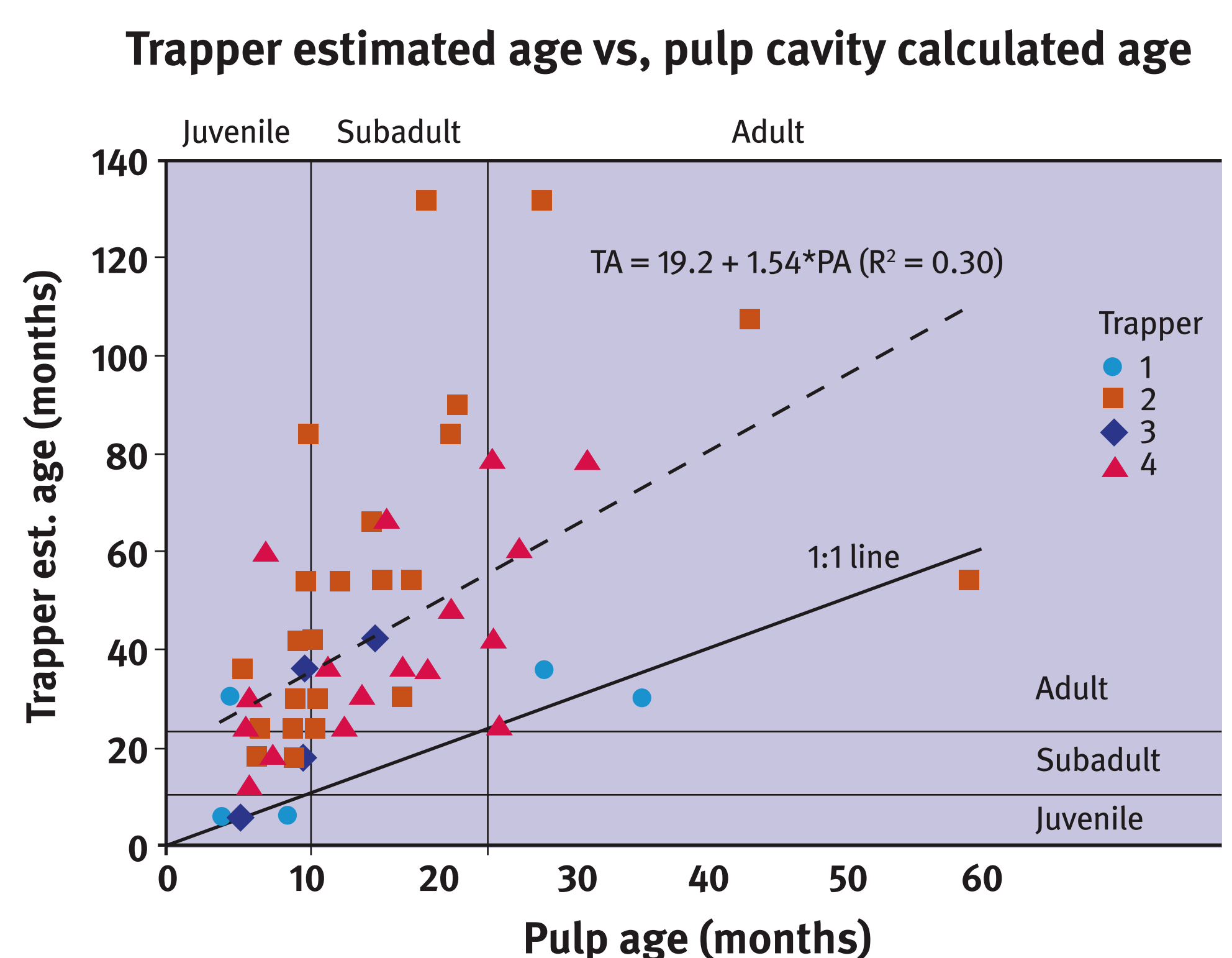
Conclusions

Use of PC:TW ratio calculations for all credible reporting of wild dog ages.

We need a guide to assist in estimating the age of wild dogs in the field.



Closure of the pulp cavity within the canine teeth of wild dogs shows strong relationship with age (From Kershaw et al. 2005, pg 253)



Dingo ages as estimated by trappers (Trapper estimated age) plotted against the corresponding pulp cavity: tooth width ages.

More information

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Guide to field estimating the age of wild dogs

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< 6 months

Milk teeth, adult canines not yet emerged.

6–9 months

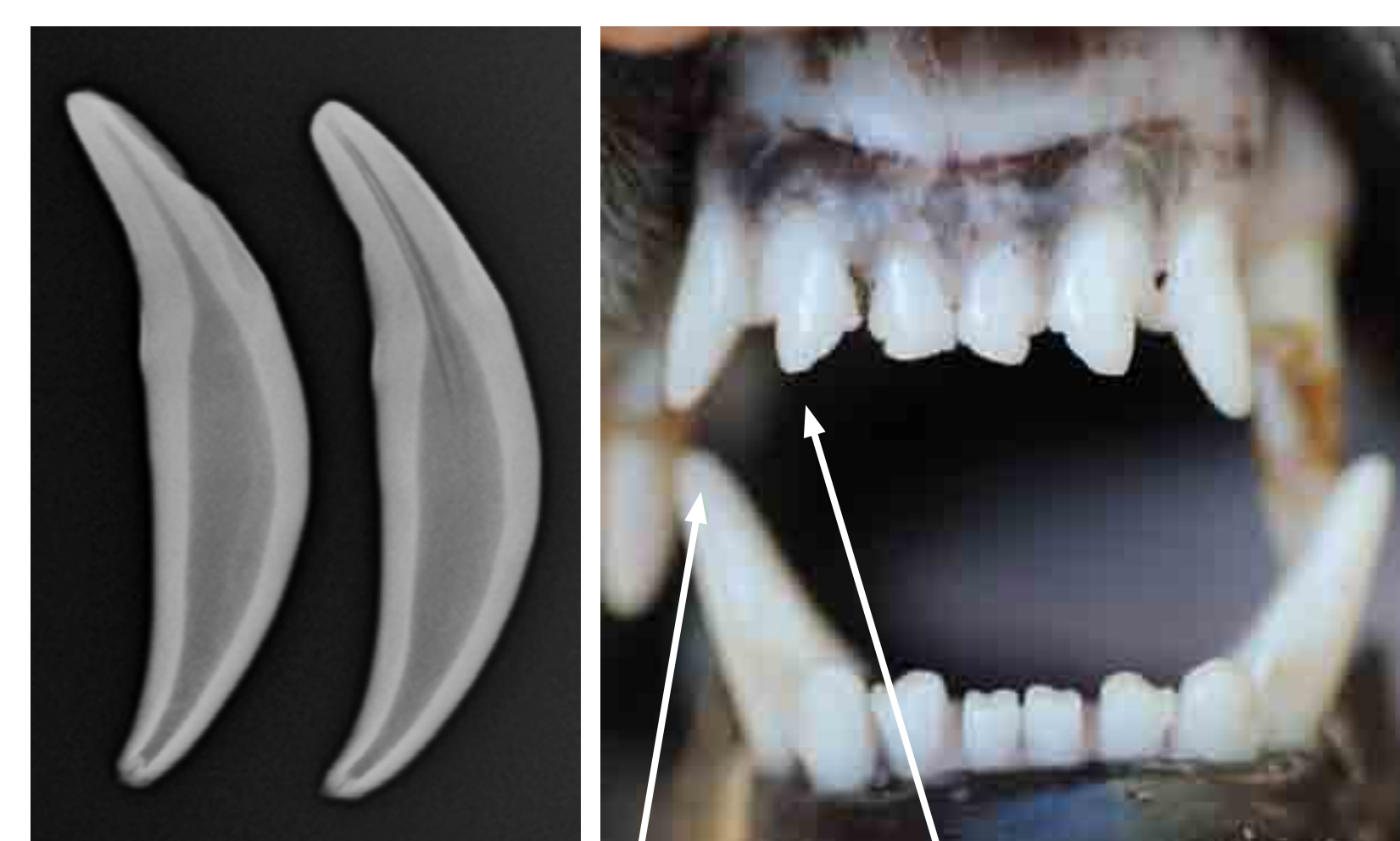
Canines emerged and open rooted.



Partly emerged canine with juvenile canine not yet pushed out

12 months

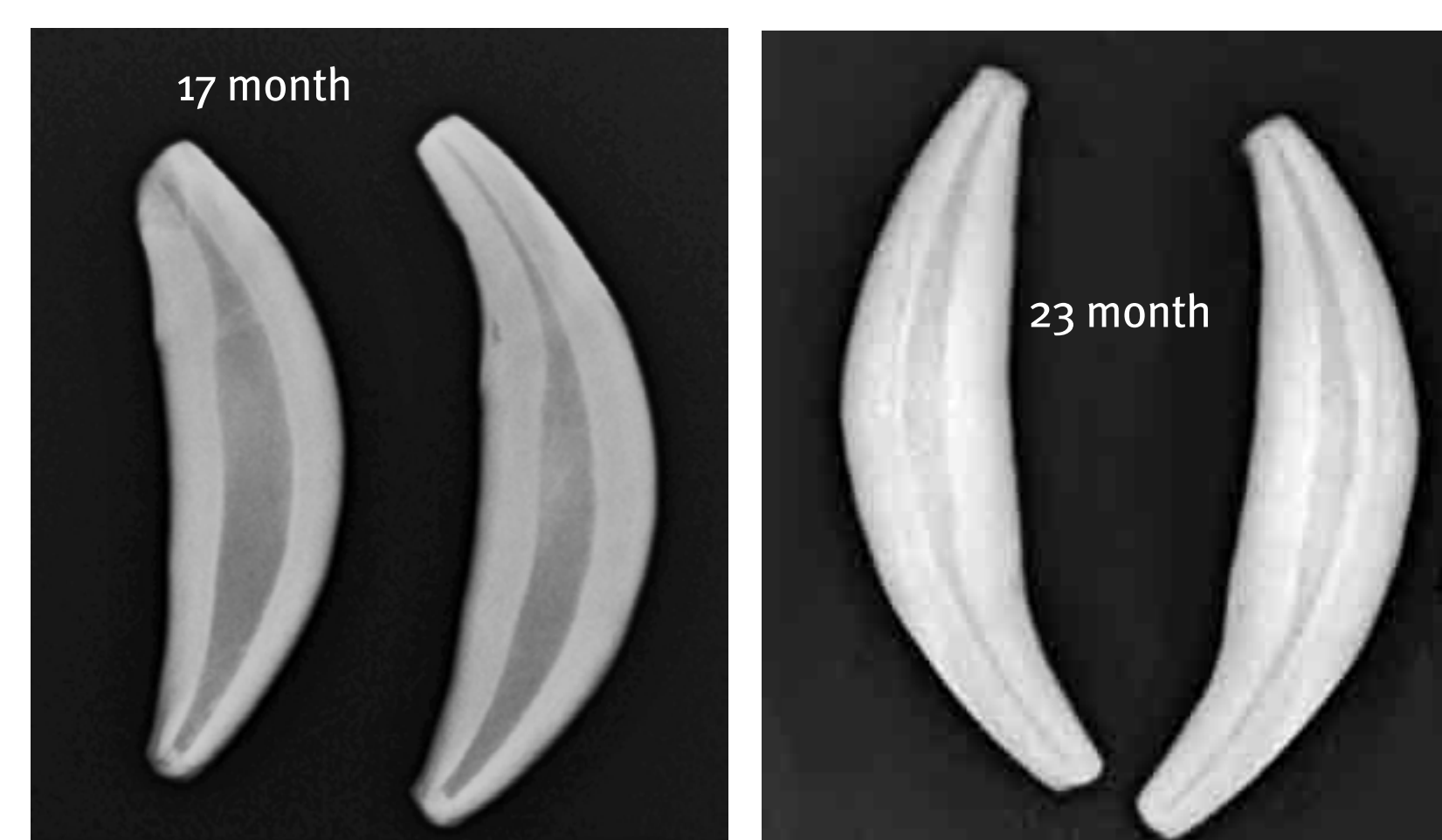
Canines fully in place with rounded tips. Pointed cusps and notches on incisors. Large pulp cavity.



Rounded tips on canines, cusps and notches on incisors.

2 years

Canines get slightly flattened tips. Cusps flatten and notches on incisors begin to wear off. Pulp cavity slowly closes.



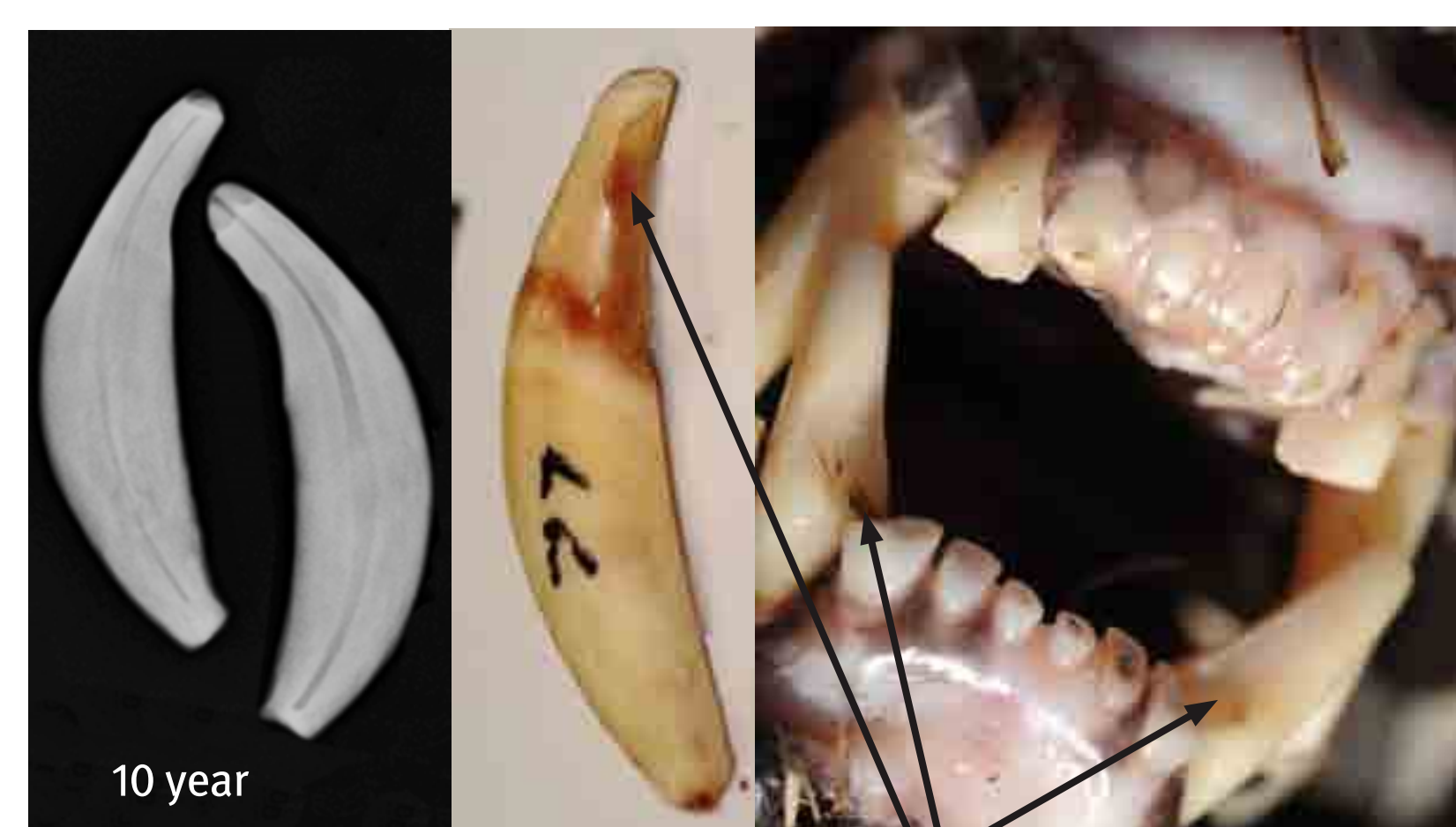
4 years

Canines get flattened tips, discolorations and show evidence of wear marks from opposing teeth. Notch on incisors worn off.



10 years

Some incisors worn to gum-line. Teeth flattened to pegs. Erosions and discoloration common. Pulp cavity no longer visible or just a thin line.



Wear marks on opposing teeth

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