



DETERMINING THE AGE OF WILD PIGS

USING TOOTH ERUPTION AND ESTIMATED WEAR

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INTRODUCTION

The age of New Zealand pigs can be estimated by the eruption sequence of the Molar teeth up to 42 months, with a good degree of accuracy. This is fortunate because, in most situations, between 60% & 80% of the wild pig harvest will be less than 48 months of age. Older pigs can be aged by wear estimations, while less accurate, can still provide good survey information.

The tooth eruption sequence in New Zealand wild pigs is described in a Landcare research paper published in 1992, *A Comparison of Tooth Eruption and Wear and Dental Cementum Techniques in Age Determination of New Zealand Feral Pigs*. Some 2000 pig jaws were examined in a comprehensive study.

Elements of this paper and the Authors field experience are presented here in a photographic and chart form to assist Field Workers to age pig jaws for wildlife survey work.

SUMMARY OF TOOTH ERUPTION

Shortly after birth a pig has 3 Premolars [P1, P2, and P3]. These are small chisel like deciduous teeth. Distinctively the third tooth has 3 cusps. These are replaced by permanent teeth at 14 to 18 months.

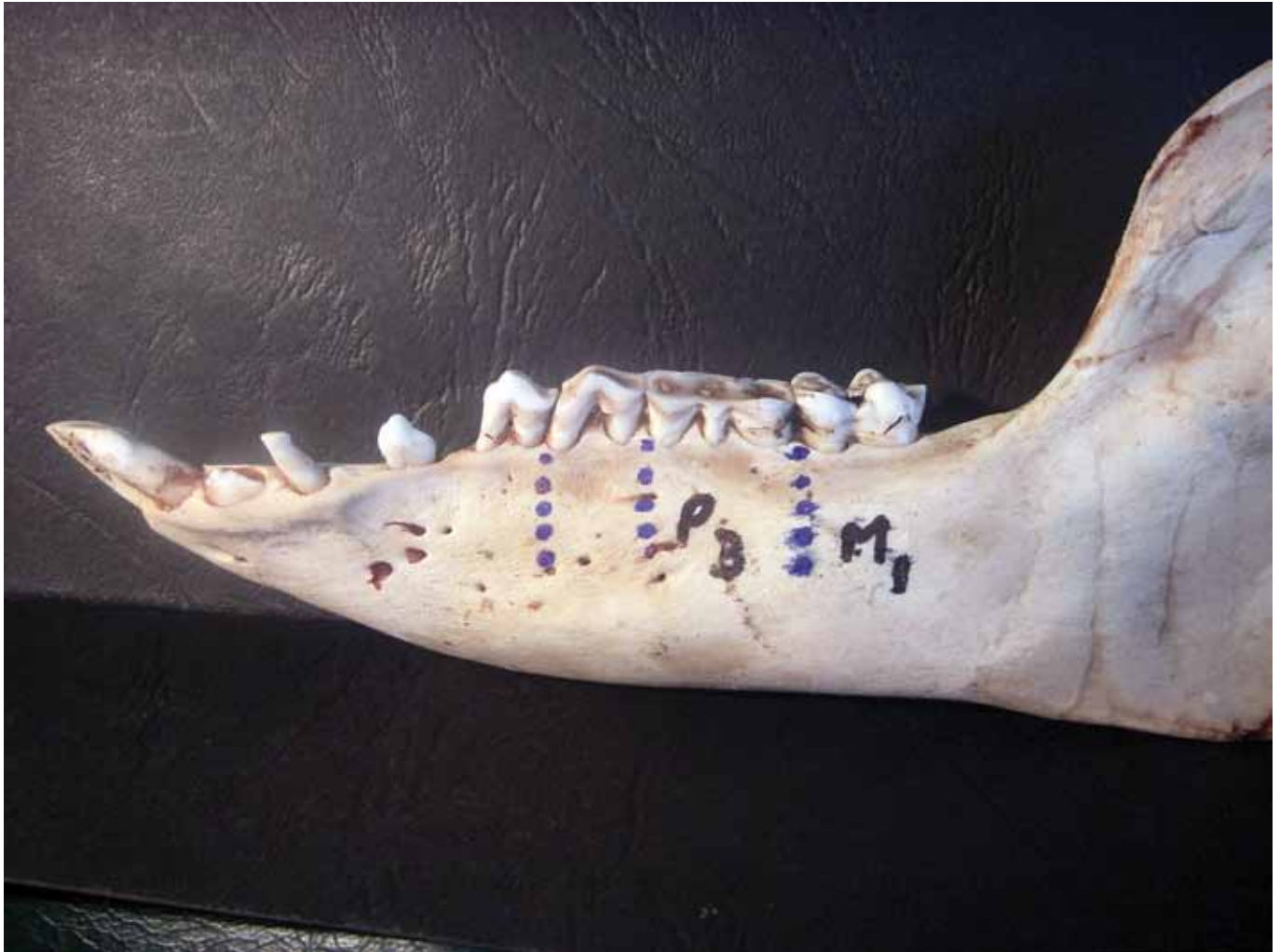
The 3 most important teeth, for ageing, are the main molars [M1, M2, M3] Located in the rear of the jaw. These teeth erupt in a known sequence as the pig matures:

- **M1:** Birth tooth, erupts at 4 to 6 months
- **M2:** Erupts at 12 months
- **M3:** First cusp at 24 months
- **M3:** Third cusp up at 42 months.

After 42 months age is estimated by wear.

The example jaw photos are of clean jaws which makes viewing the teeth easy. The Field Worker will be generally dealing with fleshy jaws. High gum lines with mud, blood and occasional bullet holes. This makes this job difficult. It takes some patience and persistence to acquire the skill to make accurate age assessments.

6/7 MONTH JAW



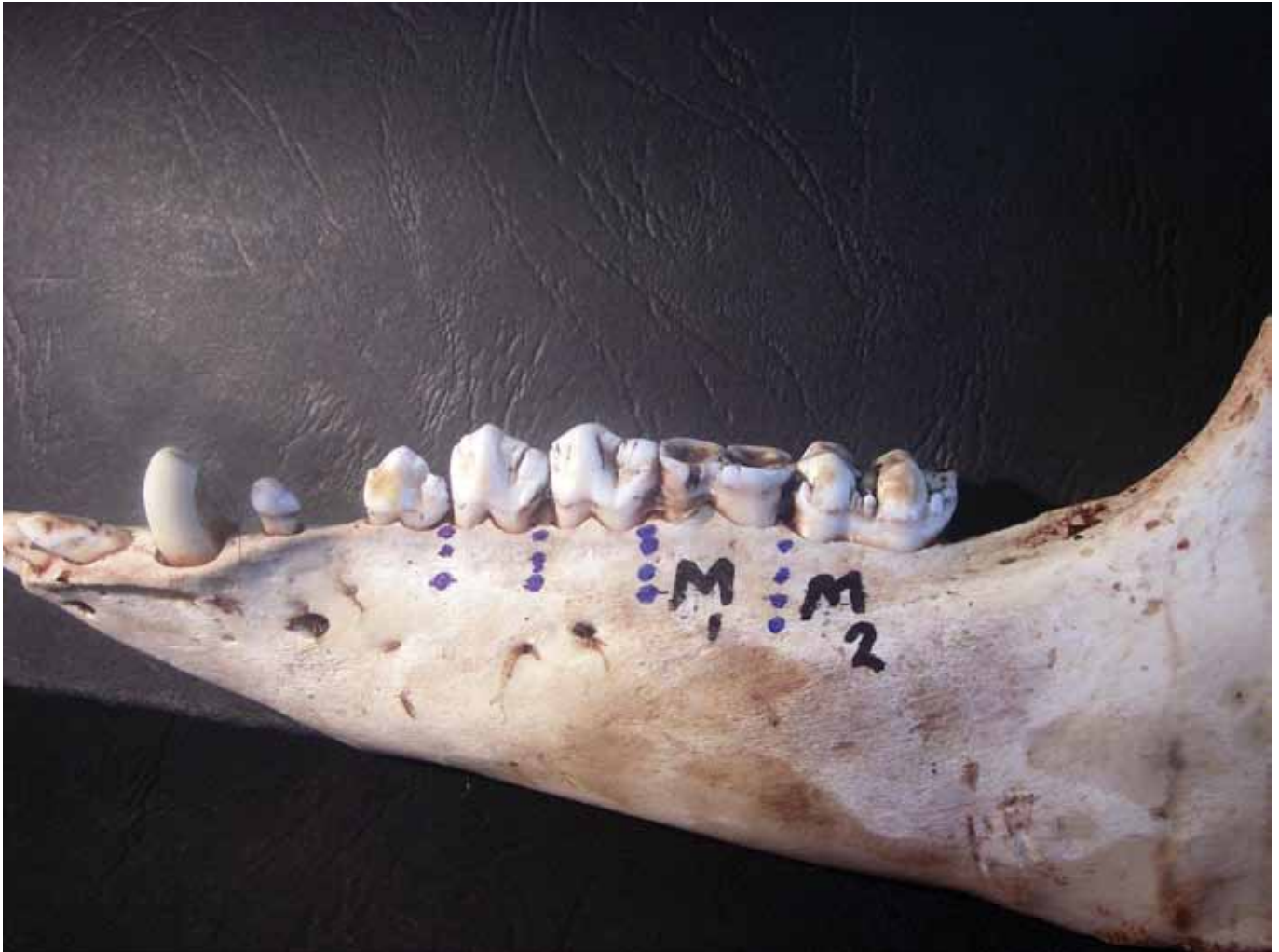
The First permanent molar has erupted; there is no sign of the M2. Note the triple cusps on the deciduous P3

10 MONTH JAW



The M2 is beginning to erupt, but is still below the gum line. On a fresh jaw the space can be seen and the tooth felt or seen if the flesh is scraped away. The deciduous premolars are still present showing considerable wear. Wear is also visible on the M1

18/20 MONTH JAW



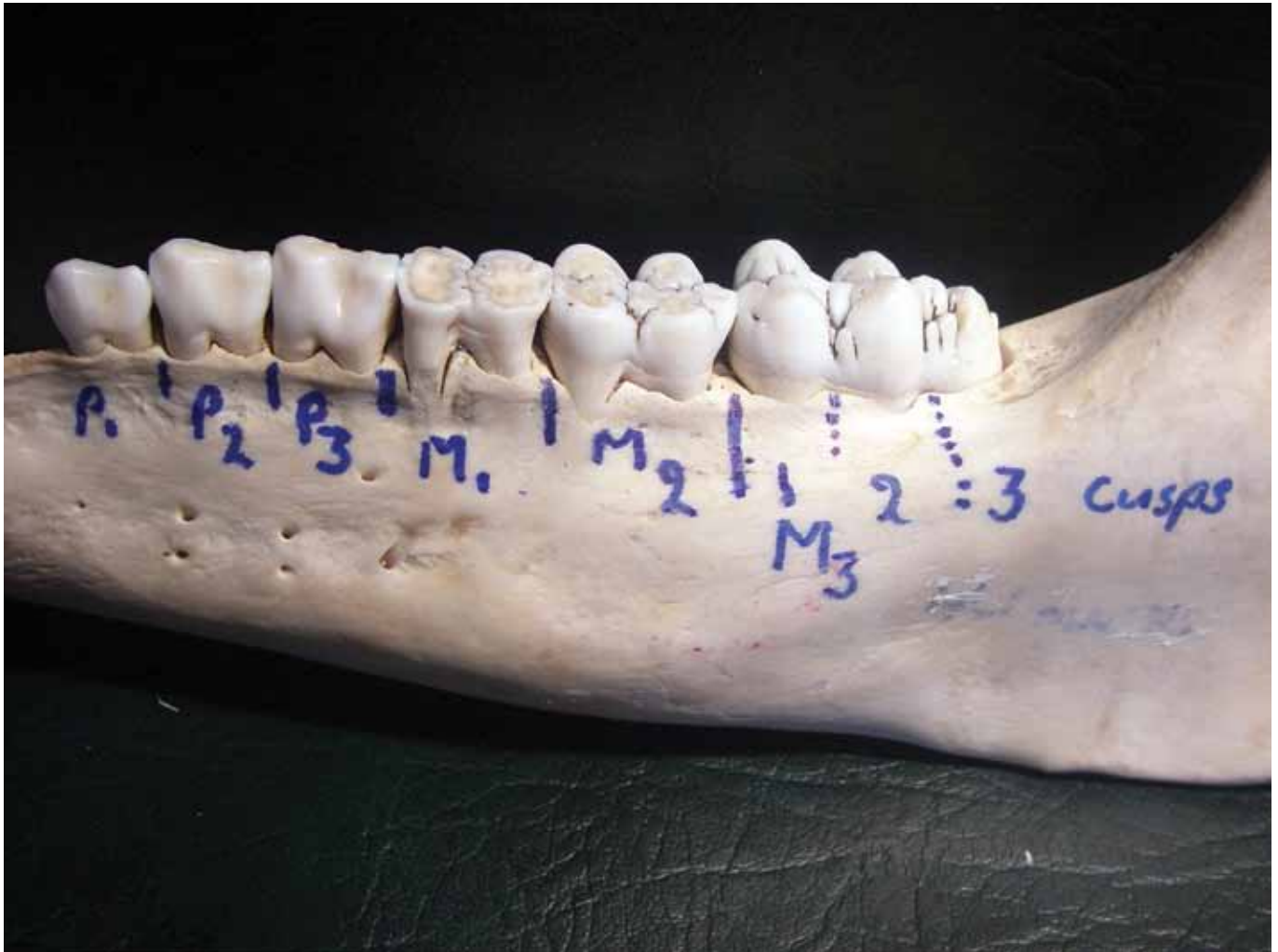
All three Premolars have been replaced with adult teeth. This takes place by 18 months. Both the M1 and M2 are present. There is room for the first cusp of the M3 [24 month cusp] but it is not yet visible.

26/29 MONTH JAW



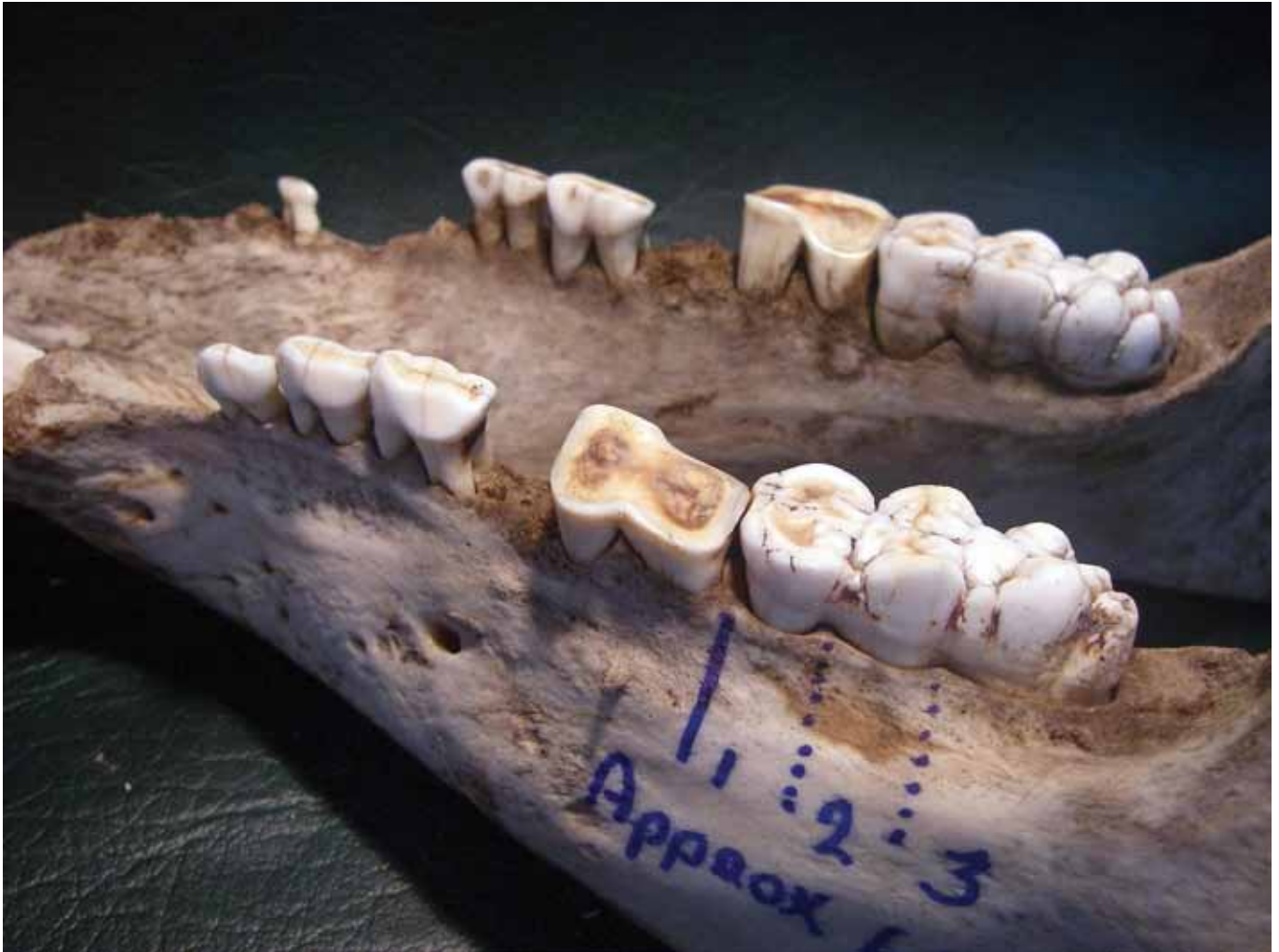
The first cusp of the M3 has erupted, making this jaw 24+ months. The second cusp is just emerged and would still be below the gum line. This jaw is approx 26/29 months. Note the wear on the M1 and M2

40/42 MONTH JAW



The third cusp of the M3 has erupted and is just thru the gum line. There is no apparent wear on the 24 mnth cusp of the M3. All the teeth have been labeled on this jaw

48/52 MONTH JAW



There is little apparent wear on the third cusp of the M3. This tooth has erupted over a 22 month period. Note the wear on the first cusp of the M3. Compare that with the heavy wear on the 12 month older M2. Unfortunately the M1 is missing on this jaw.

60 MONTH JAW



All the cusps on the M3 are well worn but the cusps are still defined. Note the heavy wear on the M1.




APPROX 72 TO 84 MONTH JAW



This is a good example of an aged pig jaw. All teeth are well worn. The M1 is almost worn in half. The M3 has all 3 cusps worn flat and it is becoming difficult to distinguish between the cusps. Pigs this old make >10% of the harvest in most situations.

FERAL PIG TOOTH ERUPTION

AGE (months)	PREMOLAR			MOLAR			COMMENTS
	1	2	3	1	2	3	
1							
2							P2 generally erupts
3							
4							First cusp M1 visible
5							
6							M1 all visible
7							
8							
9							
10							first cups M2 visible
11							
12							
13							M2 has erupted
14							
15							
16							Triple cusped P3 replaced
17							
18							Last deciduous tooth replaced
19							
20							
21							
22							M3 visible
23							
24							first cusp M3
25							
26							
27 / 29							2nd cusps M3 erupted
30 / 32							3rd cusp M3 visible
33 / 35							
36 / 41							
42							Third cusp M3 fully erupted

-  Deciduous teeth
-  Erupting teeth
-  Permanent teeth

TOOTH WEAR AS A GUIDE TO JAW AGE

MONTHS

48/54: First cusp M3 shows some wear.
Little wear visible on other 2 cusps

54/60: All 3 cusps show wear. Tooth not yet worn flat.

60/70: First cusp is worn flat. Other 2 cusps worn almost flat.

72++: All three cusps worn flat together



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