

# DENTAL STATUS OF THE PENANS ALONG THE MELINAU AND TERAWAN RIVERS, BARAM, SARAWAK

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## SUMMARY

*One hundred and forty-one Penans from three longhouses along the Melinau and Terawan Rivers, Baram, Sarawak were examined. The number of decayed, missing and filled teeth was determined for each subject. The number of Penans who wore dentures was noted likewise the number of Penans who brush their teeth was recorded. The relationship between these findings and their possible causes are discussed.*

## INTRODUCTION

Teeth are essential to life, both in terms of function and aesthetics. Without teeth, we would be unable to chew food properly, speak clearly, or smile confidently. Thus, the loss of teeth may be considered a handicap. This paper will examine the extent of decayed, missing and filled teeth among a group of Penans living along the Melinau and Terawan Rivers, Baram, in the Malaysian state of Sarawak. The extent of toothbrushing and the replacement of missing teeth by dentures will also be discussed.

The Penans are an indigenous group of people, found mainly in the Ulu Baram area of Sarawak. Nomadic until recently, they have yet to adapt fully to a settled way of life. As such, they live in simple huts, with no safe water supply or proper sanitation. Water for all purposes including drinking is obtained from the river or the rain, while latrines are of the bush variety. Although *padi* is the main crop grown here, the Penans occasionally have to survive on maize, tapioca or sago. Their main source of protein is wild-boar meat, obtained from hunting trips (Fig. 1).

## METHODS

A survey was carried out in early 1986 to obtain baseline data on the nutritional status, morbidity, mortality, medical and dental status of the Penans. Three Penan longhouses in Long Bangan, Long Iman and Batu Bungan, located along the Terawan and Melinau rivers respectively, participated in the survey.

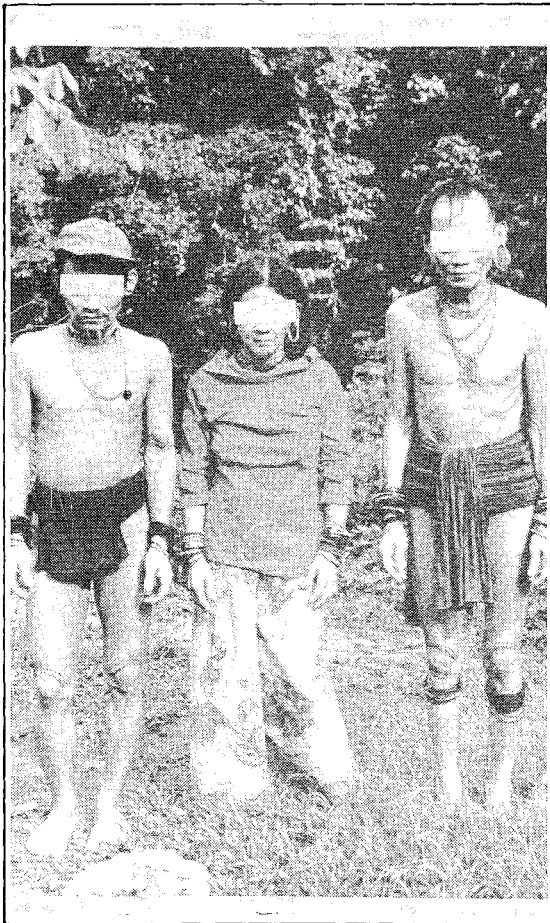
A total of 141 Penans, comprising 56 males and 85 females were examined; decayed, missing and filled teeth were noted. The age distribution of the survey group is as shown in Table I.

The dental examination was carried out in the main hall of each longhouse. The subjects were examined according to households, with the dental examination following the medical examination. The teeth were examined for decay using a mirror and probe. The examination was

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**Fig. 1** Three Penan elders from the Melinau area, on a hunting trip to the nearby Mulu National Park.

carried out by natural light in the daytime and with a torchlight at night, with each subject seated on the floor. The status of each tooth was recorded on a prepared chart.

The following criteria were used in the survey.<sup>1</sup> A tooth is considered as decayed when the cavity present has a detectably-softened floor, undermined enamel or softened wall. On an interproximal surface, the probe must be felt to enter a lesion with certainty. A tooth with a temporary filling or dressing is recorded as decayed. A tooth which has been filled but which has caries present is counted only as a decayed tooth. The filling is not counted. A permanent tooth is deemed missing if the subject is past the average age for

its eruption, or if there is a space for its eruption with no visible signs as to its likely emergence. Root fragments are also counted as missing teeth. A tooth with a filling of metal, acrylic resin, silicate cement or composites on which there is no sign of caries is recorded as filled.

## RESULTS

### Number of decayed teeth

A large percentage (82.3%) of the Penans had at least one decayed tooth, while 48.2% had between one and five decayed teeth; 27.0% had between six and ten decayed teeth; and 7.1% had more than 10 decayed teeth. However, only three (2.1%) of the 141 Penans surveyed had filled teeth (Table I).

### Number of missing teeth

Of the 141 Penans surveyed, 62.4% had at least one missing tooth, 26.2% had between one and ten missing teeth, 13.5% had between 11 and 20 missing teeth, 12.8% had between 21 and 30 missing teeth, while 3.5% had all 32 teeth missing. On the other hand, only 14 (9.9%) of the 141 Penans surveyed wore dentures (Table II).

### Toothbrushing

Of the 141 Penans surveyed, only 41 (48.2%) of the adults (those above 12 years of age) stated that they brush their teeth. None of the children brushed their teeth.

## DISCUSSION

The high incidence of decayed teeth (82.3%), the large proportion of Penans with at least one missing tooth (62.4%) and the fact that only 2.1% of the Penans had filled teeth, may be due to the following two main reasons: lack of dental health education resulting in poor oral hygiene; and inaccessibility of dental care.

The Penans do not seem to place much importance on their teeth, as evidenced by the fact that only 48.2% of the adults and none of the children brush their teeth. However, this may also be due to the unavailability of toothbrushes in the area.

**TABLE I**  
**NUMBER OF DECAYED TEETH AMONG 141 PENANS**

No. of decayed teeth	Age in years						All ages	
	1-5	6-12	13-18	19-35	36-55	56 and over	No.	(%)
0	11	0	2	5	4	3	25	(17.7)
1-5	8	10	11	17	17	5	68	(48.2)
6-10	10	9	4	8	6	1	38	(27.0)
11-15	1	5	0	0	2	0	8	( 5.7)
16-20	1	1	0	0	0	0	2	( 1.4)
<b>Total</b>	<b>31</b>	<b>25</b>	<b>17</b>	<b>30</b>	<b>29</b>	<b>9</b>	<b>141</b>	<b>(100)</b>

**TABLE II**  
**NUMBER OF MISSING TEETH AMONG 141 PENANS**

No. of missing teeth	Age in years						All ages	
	1-5	6-12	13-18	19-35	36-55	56 and over	No.	(%)
0	26	18	4	5	0	0	53	(37.6)
1-10	5	7	13	21	10	0	56	(39.7)
11-20	0	0	0	2	14	3	19	(13.5)
21-30	0	0	0	2	3	3	8	( 5.7)
32	0	0	0	0	2	3	5	( 3.5)
<b>Total</b>	<b>31</b>	<b>25</b>	<b>17</b>	<b>30</b>	<b>29</b>	<b>9</b>	<b>141</b>	<b>(100)</b>

Furthermore, the incidence of effective, regular brushing of teeth is probably lower than the figures obtained in this study. This can be seen in the high incidence of decayed (82.3%) and missing (62.4%) teeth.

It has also been noted that the incidence of missing teeth increases with age, possibly due to periodontal disease, which causes bone destruction

and eventual loss of the teeth involved. The lack of emphasis on tooth-brushing as well as the high incidence of decayed and missing teeth among the Penans point to a lack of dental health education.

In spite of the fact that 62.4% of the Penans have at least one missing tooth, only 9.9% have dentures. This is mainly due to the relative inaccessibility of dental clinics in the area. The

nearest dental clinic which has facilities for denture construction and fillings is in Marudi, about five to six hours away from the survey area, when travelling by longboat. The cost of travelling by express boat (longboat used as public transport) to Marudi and back is approximately MR\$30.00. Very few Penans can afford to pay for a denture, let alone the cost of travelling to the dental clinic. For the same reason, only three out of the 141 Penans surveyed had filled teeth.

The nearest source of dental treatment is at the *Klinik Desa* (Community Clinic) at Long Bemang, where a hospital assistant does extractions only. Even this clinic is some five to six hours by longboat from the survey area. The hospital assistant at Long Bemang reported that many Penans come

to the clinic requesting for extraction of non-carious teeth, because they are afraid that these teeth may decay and cause severe pain at a later date. Furthermore, some Penans believe that dentures are more aesthetic than natural teeth as dentures do not become stained and break so easily. Therefore they request extraction of their anterior teeth in order to have a denture made. This is a deplorable situation, and much needs to be done to educate the Penans concerning the importance of retaining their natural teeth.

## REFERENCE

- <sup>1</sup> *Dental epidemiological survey of adults in Peninsular Malaysia; Sept. 1974 – April 1975*. Dental Division, Ministry of Health, Malaysia, 1977.