ABSTRACT FROM DR. GORDON H. TEN BROECK'S TRIP REPORT
TO BARTLETT, TEXAS, SEPTEMBER 13 - 20, 1952.

Mr. holt stated that many families in the town used Oasis Water distributed by the Dr. Pepper Bottling Company of Waco for drinking purposes. Such practice had been the result of the widespread publicity of the detrimental effect of the Bartlett water on the teeth. How long the use of such water had been practiced was not known.

January 7, 1954

A BASE-LINE FLUOROSIS STUDY, BARTLETT, TEXAS, SEPTEMBER 1952.

I. BASIC IDENTIFYING INFORMATION

A. Purpose of Study.

1. & 2. To collect and analyze data on the incidence of dental fluorosis and the caries attack rate in children living in Bartlett, Texas to establish baselines prior to the operation there of a pilot defluoridation plant.

3. The starting date was September 15, 1952.

4. The completion date was September 19, 1952.

5. There were no co-sponsors.

6. This study will be followed by others of the same kind after lapse of a sufficient number of years (perhaps 10) to provide permanent teeth which had developed on the defluoridated water.

II. STUDY METHODS:

A. Study Group.

1. Composed of 66 native children (57 white and 9 negro), ages 6 - 17 inclusive.

2. They were selected on the basis of continuous residence (absent from Bartlett for no more than 30 days in any one year until age 8.)

3. There are no tests on statistical reliability of the sample.

B. Control Group.

1. & 2. There is no control group although in any subsequent follow-up studies, the original study group will constitute the control.

C. Measurements.

1. The data collected were:

a. Age specific DMF

b. Degree of fluorosis and incidence

2. The data were collected by a dentist using mouth mirrors, explorers and a pencil flashlight, with patient seated facing a window. Data on residency were secured by means of a questionnaire (Exhibit A) sent home with the child, and filled out by the parent.

3. The observations were made by Senior Assistant Dental Surgeon Gordon H. Ten Broeck.

4. Observations were recorded (Exhibit B) by a high school student.

D. No Treatment Was Involved.

III. EVALUATION AND ANALYSIS

1. Evaluation in this study is limited to determination of DMF rates by age, and the incidence and degree of fluorosis. In subsequent studies, comparison will be made of DMF and fluorosis before and after defluoridation.

2. Attached are graphs (Figures 1 and 2) showing DMF curves derived from summary sheets (Exhibits C and D), and tables (1 and 2) showing incidence and degree of fluorosis.

3. Categorical breakdown was by age and race. All children included in the study were natives with histories of continuous residence. Subsequent to the study it was reported that some children (identities unknown) had been consuming low-fluoride water for an undetermined period (see attached abstract from Dr. Ten Broeck's trip report). Consequently, there is a possibility that the degree of fluorosis may have been reduced in intensity, and an unforeseen error introduced in continuity of water history.

IV. RESPONSIBILITIES.

1. & 2. The dental staff of the Region VIII office collected and summarized the data.

3. It is not anticipated that a report will be published.

Exhibit A.

Dear Parent or Guardian:

As part of a dental study being made in the school attended by your child _____ (Name) it would be helpful if you would check the information below and return this slip to your child's teacher.

* * * * *

1. Has your child lived in this community all his life? Yes__ No__.

2. Between birth and eight years of age, has your child lived away from this community for more than one month at any time? Yes__ No__.

3. Between birth and eight years of age, has your child lived away from this community for more than two months at any time? Yes__ No__.

Dear Parent or Guardian:

As part of a dental study being made in the school attended by your child _____ (Name) it would be helpful if you would check the information below and return this slip to your child's teacher.

* * * * *

1. Has your child lived in this community all his life? Yes__ No__.

2. Between birth and eight years of age, has your child lived away from this community for more than one month at any time? Yes__ No__.

3. Between birth and eight years of age, has your child lived away from this community for more than two months at any time? Yes__ No__.

Exhibit B

DENTAL EXAMINATION RECORD FORM

Date: _____

Name _____ Age _____ W N O

School _____ City _____ State _____

7	6	5	4	3	2	1	1	2	3	4	5	6	7
7	6	5	4	3	2	1	1	2	3	4	5	6	7

FLUOROSIS					
Normal	Questionable	Very Mild	Mild	Moderate	Severe

CODE:

U - Unerrupted (include impacted teeth)
- - Tooth non-carious
M - Missing (exclusive of congenitally absent)
EI - Extraction indicated
F - Filled (a carious filled tooth is either 1 or 2)
1 - Pit and/or fissure caries
2 - Other caries
(in both 1 and 2, explorer must sink into soft dentine)

(8-11-52)

Exhibit C

Average DMF Permanent Teeth Per Child. 57 Native White Schoolchildren, Ages 6-17, by Age.

SUMMARY SHEET

CITY Bartlett, Tenne DATE September 1962

SCHOOL

Age	# Children	# with DMF	% with DMF	Total DMF	Av. DMF Per Child	# with D	% with D	Total D	Av. D Per Child	# with M	% with M	Total M	Av. M Per Child	# with F	% with F	Total F	Av. F Per Child
5	0	0	0	0	0												
6	4	3	75.0	4	1.00												
7	6	5	83.3	11	1.83												
8	11	8	72.7	25	2.00												
9	4	3	75.0	8	2.00												
10	7	6	85.7	14	2.00												
11	3	2	66.7	8	2.67												
12	5	5	100.0	20	4.00												
13	3	2	66.7	4	1.33												
14	4	4	100.0	12	3.00												
15	4	4	100.0	28	7.00												
16	4	4	100.0	20	5.00												
17	2	2	100.0	31	15.50												
18	0	0	0	0	0												
Total	57	48		186													

Exhibit D

Average DMF Permanent Teeth Per Child. 66 Native Schoolchildrem, 57 White and 9 Negro, Ages 6-17, by Age.

SUMMARY SHEET

CITY Bartlett, Texas

SCHOOL

DATE September 1952

Age	# Children	# with DMF	% with DMF	Total DMF	Av. DMF Per Child	# with D	% with D	Total D	Av. D Per Child	# with M	% with M	Total M	Av. M Per Child	# with F	% with F	Total F	Av. F Per Child
5	0	0	0	0	0												
6	4	3	75.0	4	1.00												
7	6	5	83.3	11	1.83												
8	11	8	72.7	23	2.09												
9	4	3	75.0	8	2.00												
10	7	6	85.7	14	2.00												
11	3	2	66.7	8	2.67												
12	6	6	100.0	38	6.33												
13	7	4	57.1	18	2.57												
14	4	4	100.0	12	3.00												
15	6	6	100.0	44	7.33												
16	5	5	100.0	22	4.40												
17	3	3	100.0	32	10.67												
18	0	0	0	0	0												
Total	66	55		234													

Fig. 1 Average DMF Permanent Teeth Per Child.
97 Native White Schoolchildren, Ages 6-17,
by Age. Bartlett, Texas. September 1952.

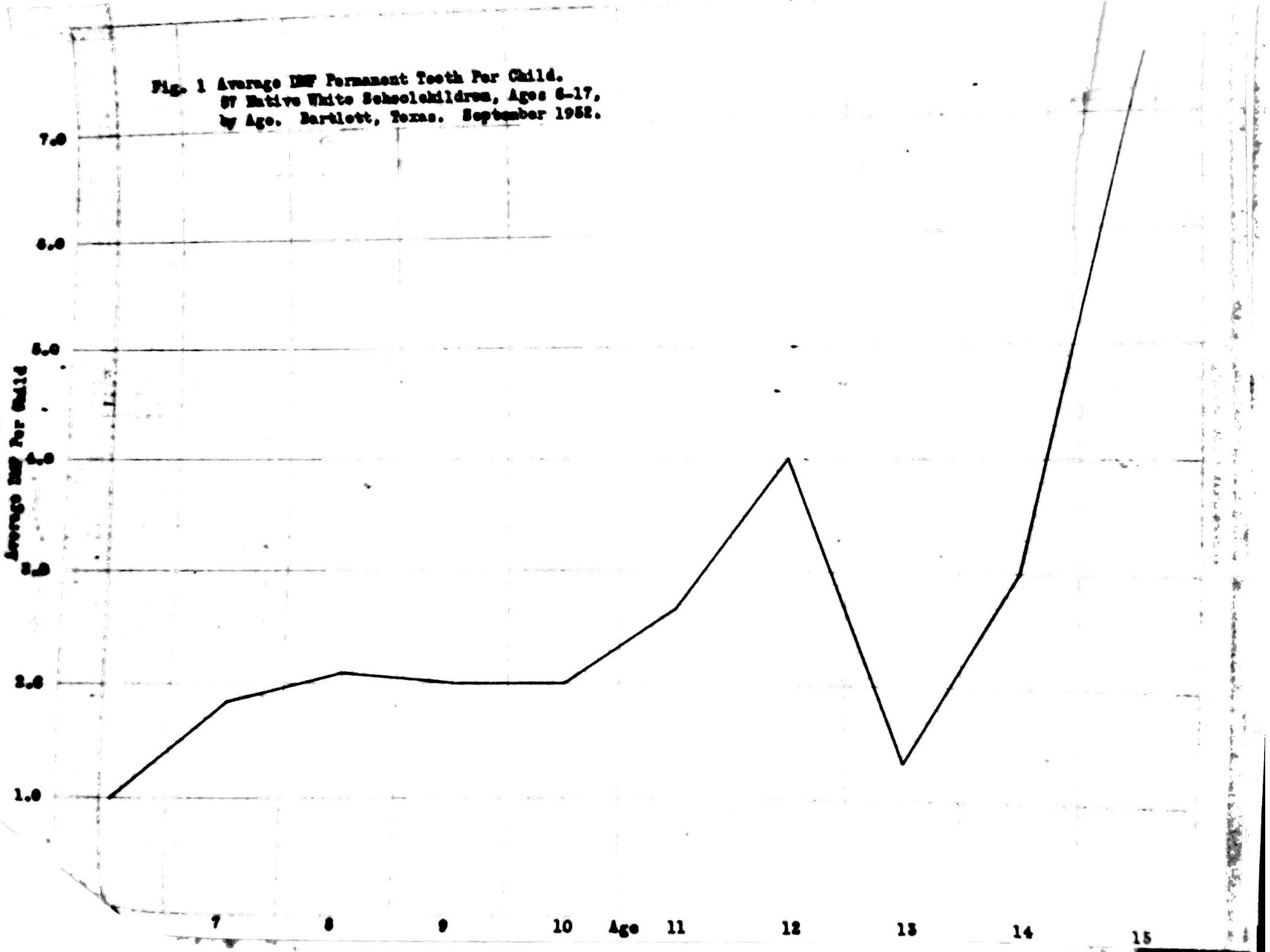

Fig. 2 Average DMF Permanent Teeth Per Child.
66 Native Schoolchildren, 57 White and 9 Negro,
Ages 6-17, by Age.

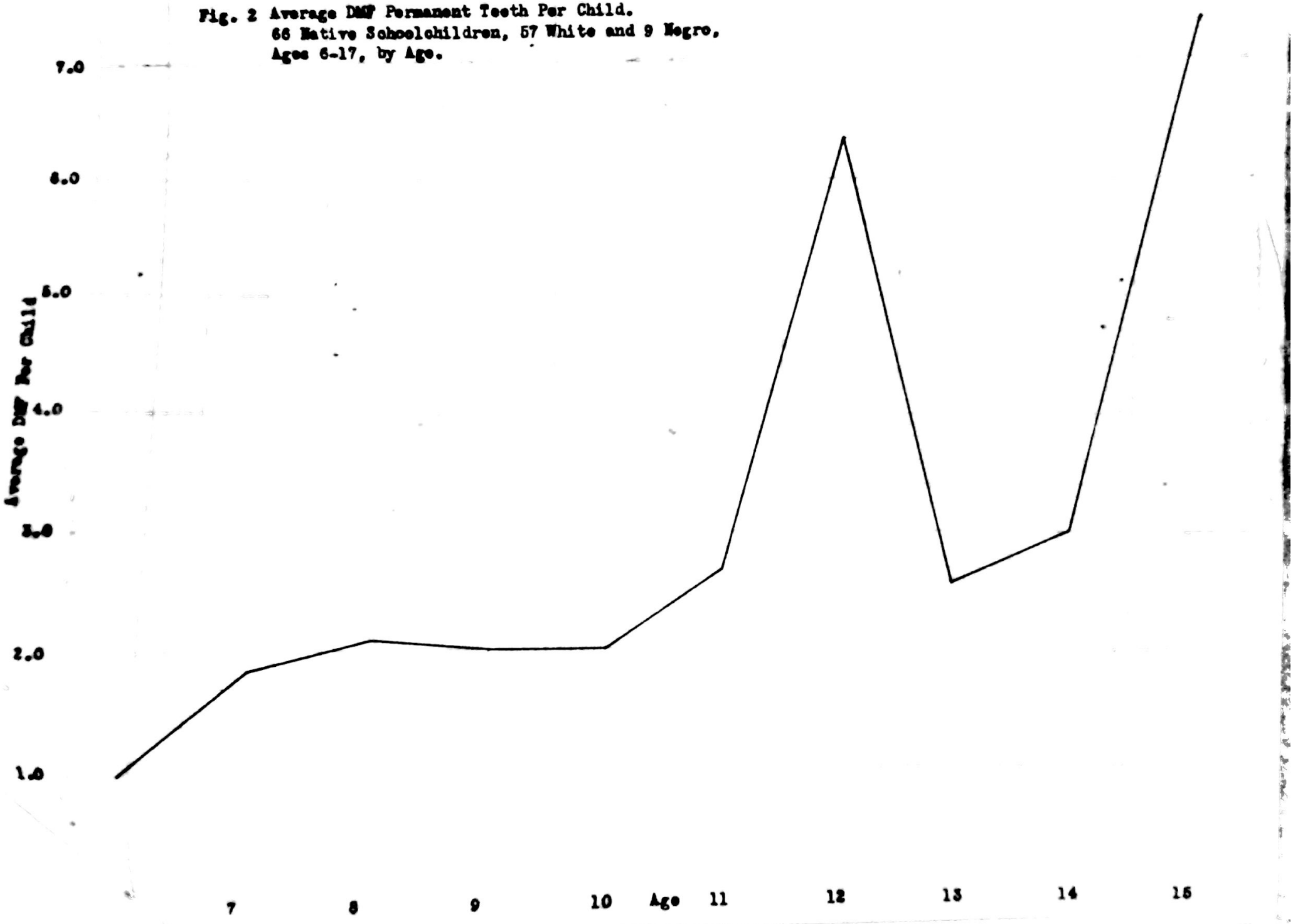

TABLE 1

Incidence of Fluorosis by Degree.
87 Native White Schoolchildren, Ages 6-17,
by Age. Bartlett, Texas, September, 1952.

Age	Degree of Fluorosis					
	Normal	Questionable	Very Mild	Mild	Moderate	Severe
6		1	1	1	1	
7		1		2	1	2
8				5	3	3
9			1	1	2	
10				2	4	1
11				2	1	
12					3	2
13				1	2	
14					2	2
15					3	1
16					3	1
17					1	1
11 Ages	0	2	2	14	26	13
er cent		3.51	3.51	24.56	45.61	22.81

TABLE 2

Incidence of Fluorosis by Degree.
66 Native Schoolchildren, 57 White and 9 Negro, Ages 6-17,
by Age, Bartlett, Texas, September, 1952.

Age	Degree of Fluorosis					
	Normal	Questionable	Very Mild	Mild	Moderate	Severe
6		1	1	1	1	
7		1		2	1	2
8				5	3	3
9			1	1	2	
10				2	4	1
11				2	1	
12				1	3	2
13				3	2	2
14					2	2
15					4	2
16					3	2
17					1	1
All Ages	0	2	2	18	27	17
Per cent		3.03	3.03	27.27	40.91	25.76