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19.



ON THE LIABILITY OF DIFFERENT CLASSES OF TEETH TO DECAY.

By ADAMS PARKER, Esq., L.D.S.R.C.S.

IN this month's number of the 'Dental Cosmos' will be found a paper from the pen of the late J. F. Flagg, D.D.S., on the relative liability of teeth to decay, forming part of a contribution to that Journal on Dental Pathology and Therapeutics.

Some years ago, when Senior Surgeon Dentist to the Dental Hospital in this town, I was induced to make a series of observations upon this subject, and on reference to the Annual Report of the Hospital for the year 1859 I find the statistics alluded to, which I have embodied in the form of a short paper for your Journal.

This statement was made from 1952 operations performed during the year 1859, and no less a number than 1494 were performed on patients under the age of twenty, and out of the same number of operations 1217 were upon the most valuable teeth in the head, viz. the molars, at ages ranging from five years up to eighty years of age.

I also drew up a similar statement with reference to the teeth of children up to five years of age, a period of life the most important as regards the future state of the Dental organs. It is well known how intimately connected the second teeth are with the first, and that disease in particular, and not unfrequently an operation imperfectly performed upon the latter, may lead to serious and perhaps irreparable mischief to the former. This was most forcibly impressed

upon me by numerous cases that came under my care when Dental Surgeon to the Institution from which the statistics were taken.

In the year 1848 J. Tomes Esq., F.R.S., my late master, published a series of tables in his book on 'Dental Physiology and Surgery,' page 149, not only with respect to the relative liability of different classes of teeth to decay, but also a statement of the several conditions that rendered the removal of the teeth necessary.

This same plan I also adopted (as will be seen in the third Annual Report of the Birmingham Dental Hospital), and in taking every class of tooth carefully recorded from the notebook, not only the various diseases that rendered the tooth or teeth liable to be removed, but the various positions in which the teeth were attacked by caries, and the percentage in every class.

Upon comparing my notes with those made by Mr. Tomes and also with those quoted in the 'Dental Cosmos,' I find scarcely any difference. Mr. Tomes, however, makes the canines liable to caries in a greater proportion than the central incisors by 7 per cent., viz. central incisors $33\frac{1}{2}$, canines $40\frac{1}{2}$, when I have found them less liable to caries than any other tooth.

W ~~E~~. C. Head, D.D.S., from a series of researches made in 1847, places the upper central incisors as the most liable of all the teeth to decay, when, so far as I have been able to judge from large hospital practice, I do not think there can be any doubt as to the class of teeth most liable to decay, viz. the first permanent molar.

The following table, will in some measure bear out my remarks upon this subject, one I think of much importance, as Dr. Flagg says, "In the formation of a correct diagnosis as to the advisability of extraction in cases of irregularity, the warrant of expense in filling and treating cases, the expectation of durability of teeth allowed to remain to subserve the purposes of mastication, or to act as supports through the agency of clasps in cases of mechanical work, and other considerations of a like nature. With knowledge of liability to decay we are enabled to arrive at opinions in all these matters, which time will usually prove to be correct with almost mathematical accuracy."

Having compiled other Tables relative to the removal of different classes of teeth on account of various diseases, I have, at the request of the Editor, included them in this paper, thinking they may be of interest to some readers of the Journal (see p. 5).

My principal object in drawing attention to this subject is to show that a correct knowledge or even a partial knowledge of such investigations will assist the Dentist in the operating-room to a very great extent, and enable him to save much valuable time both to himself and his patient.

Tabular statement of relative liability of teeth to decay.

~~E.~~ C. HEAD, D.D.S. 1867. 4

1. Upper central incisor.
2. Lower first molar.
3. Upper first molar.
4. Lower second molar.
5. Upper lateral incisor.
6. Upper second molar.
7. Upper second bicuspid.
8. Upper first bicuspid.
9. Lower second bicuspid.
10. Lower third molar.
11. Upper third molar.
12. Upper cuspid.
13. Lower first bicuspid.
14. Lower lateral incisor.
15. Lower central incisor.
16. Lower cuspid.

J. FOSTER FLAGG, D.D.S. 1874.

1. Lower first molar.
2. Upper first molar.
3. Lower second molar.
4. Upper second molar.
5. Upper lateral incisor.
6. Upper second bicuspid.
7. Upper central incisor.
8. Upper first bicuspid.
9. Lower second bicuspid.
10. Lower third molar.
11. Upper third molar.
12. Upper cuspid.
13. Lower first bicuspid.
14. Lower lateral incisor.
15. Lower central incisor.
16. Lower cuspid.

TABLE 1.—*Showing the liability of the different classes of teeth to decay at given ages.*

AGES.	TEETH.							
	Central incisors.	Lateral incisors.	Canines.	First bicuspid.	Second bicuspid.	First molars.	Second molars.	Third molars.
Under 8 yrs. of age	14	15	...	...	...	13	...	...
From 8—10.....	30	38	2	3	5	179	17	...
10—15.....	45	26	13	42	59	228	67	5
15—20.....	26	31	19	40	49	159	83	17
20—25.....	3	13	8	21	36	56	30	22
25—30.....	4	3	...	10	10	42	29	5
30—35.....	4	4	...	4	4	21	14	4
35—40.....	4	4	5	4	7	11	15	5
40—45.....	1	5	1	1	1	8	6	2
45—50.....	2	2	...	3	...	5	1	1
50—55.....	...	...	...	1	...	1	3	...
55—60.....	1	...	1	...	...	...	...	1
60—65.....	...	...	1	1	1	1	...	1
65 and upw.	...	1	1	...	...	1	...	1
	134	142	51	130	172	725	265	64

TABLE 2.—*Showing the liability of the teeth of children to decay at given ages and the different classes.*

This table relates to the temporary teeth only.

AGES.	TEETH.				
	Central incisors.	Lateral incisors.	Canines.	First molars.	Second molars.
Under 5 years of age	33	28	8	40	41
From 5—10	2	4	20	25	44
10—15	3	...	7	6	2
15 and upwards .....	...	...	1	2	3
	38	32	36	73	90

TABLE 3.—*On 3000 permanent teeth extracted for various causes at the Middlesex Hospital.*

‘Dental Physiology and Surgery,’ J. Tomes, F.R.S.

72	were central incisors.
117	„ lateral incisors.
78	„ canines.
273	„ first bicuspid.
434	„ second bicuspid.
1124	„ first molars.
637	„ second molars.
265	„ third molars.
3000	

TABLE 4.—*Showing the relative percentage of any one kind of tooth extracted between the specified ages.*

‘Dental Physiology and Surgery,’ J. Tomes, F.R.S.

KINDS OF TEETH.	TEETH.							
	Under 15.	Between 15 & 20.	Between 20 & 25.	Between 25 & 30.	Between 30 & 40.	Between 40 & 50.	Between 50 & 60.	Upwards of 60.
Of the—								
Central incisors	15½	8½	5½	8½	12½	26½	16¾	7
Lateral incisors	16½	14½	9½	6¾	12	19¾	11	10½
Canines	16¾	15½	5	5	15½	25½	6½	10½
First bicuspid.	14	23¾	21¼	10¼	15	8¾	2½	4½
Second bicuspid	10¾	25¼	20	12	15	8	5	4
First molars ...	33¾	27	16	8½	7¾	4½	2	1
Second molars .	7	24	20½	14¾	14½	8¼	8	3
Third molars ..	½	6½	19¼	23½	26	15¾	5¾	2¾

TABLE No. I.—Showing the various conditions of the CENTRAL INCISORS, temporary and permanent, rendering their removal necessary, both in the Male and Female, and in the Upper and Lower Jaws.

AGES.	CARIES.										Stumps.	Exostosis.	Necrosis.	Inflammation, dental periosteum.	Alveolar abscess.	Space for canines.	Neuralgia, &c.	Loose, from absorption of alveoli and gums.	JAWS			
	Masticating surface.		Anterior surface.		Posterior surface.		Buccal surface.		Lingual surface.													
	M	F	M	F	M	F	M	F	M	F												
Under 15	3	...	...	...	...	...	...	10	8	...	...	...	...	...	...	47	33	Upper.		
Between 15 and 20	3	1	2	7	...	...	...	...	...	35	32	Lower.		
	2	2	...	...	...	...	...	...	...	4	5	Upper.		
20 " 25	5	1	...	...	...	...	...	...	2	1	Upper.		
25 " 30	7	2	...	...	...	...	...	...	3	4	Lower.		
30 " 35	1	4	...	...	...	...	...	...	1	3	Upper.		
35 " 40	1	2	...	...	...	...	...	...	5	...	Lower.		
40 " 50	2	2	...	...	...	...	...	...	1	...	Upper.		
50 " 60	2	4	...	...	...	...	...	...	...	2	Lower.		
60 " 70	4	2	...	...	...	...	...	...	...	...	Upper.		
70 and upwards	3	2	...	...	...	...	...	...	...	...	Lower.		
	2	2	...	...	...	...	...	...	...	4	Upper.		
Total number	3	5	3	48	43	103	91	Lower.
	Upper.	
	Lower.	

TABLE No. II.—Showing the various conditions of the LATERAL INCISORS, temporary and permanent, rendering their removal necessary, both in the Male and Female, and in the Upper and Lower Jaws.

AGES.	CARIES.										Stumps.	Exostosis.	Necrosis.	Inflammation, den- tal periosteum.	Alveolar abscess.	Space for canines.	Neuralgia, &c.	Loose, from absorp- tion of alveoli and gums.	JAWS.		
	Masticating surface.		Anterior surface.		Posterior surface.		Buccal surface.		Lingual surface.												
	M	F	M	F	M	F	M	F	M	F											
Under 15										2	1							41	25	Upper.	
Between 15 and 20													1					23	24	Lower.	
20 " 25									1	2								1	2	Upper.	
25 " 30									1	1	2	5									Lower.
30 " 35											2	3									Upper.
35 " 40																					Lower.
40 " 50												1							1	4	Upper.
50 " 60																			1	3	Lower.
60 " 70																			1		Upper.
70 and upwards ...																					Lower.
Total number									2	3	5	14		1					69	58	

TABLE No. III.—Showing the various conditions of the CANINES, temporary and permanent, rendering their removal necessary, both in the Male and Female, and in the Upper and Lower Jaws.

AGES.	CARIES.																JAWS.							
	Masticating surface.		Anterior surface.		Posterior surface.		Buccal surface.		Lingual surface.		Stumps.	Exostosis.	Necrosis.	Inflammation, dental periosteum.	Alveolar abscess.	Space for canines.		Neuralgia, &c.	Loose, from absorption of alveoli and gums.					
	M	F	M	F	M	F	M	F	M	F									M	F	M	F	M	F
Under 15											22	3							22	29	Upper.			
Between 15 and 20											9	8							9	8	Lower.			
											3	4							3	4	Upper.			
20 " 25																			7	2	Lower.			
25 " 30																				2		Upper.		
											1		1						2	1	Lower.			
30 " 35																				1		Upper.		
																				1		Lower.		
35 " 40																							Upper.	
																							Lower.	
40 " 50																				1		Upper.		
																				2		Lower.		
50 " 60																							Upper.	
																							Lower.	
60 " 70																				1		Upper.		
																							Lower.	
70 and upwards ...																							Upper.	
																							Lower.	
Total number											4	4		1									46	51

TABLE No. IV.—Showing the various conditions of the FIRST BICUSPIDS, rendering their removal necessary, both in the Male and Female, and in the Upper and Lower Jaws.

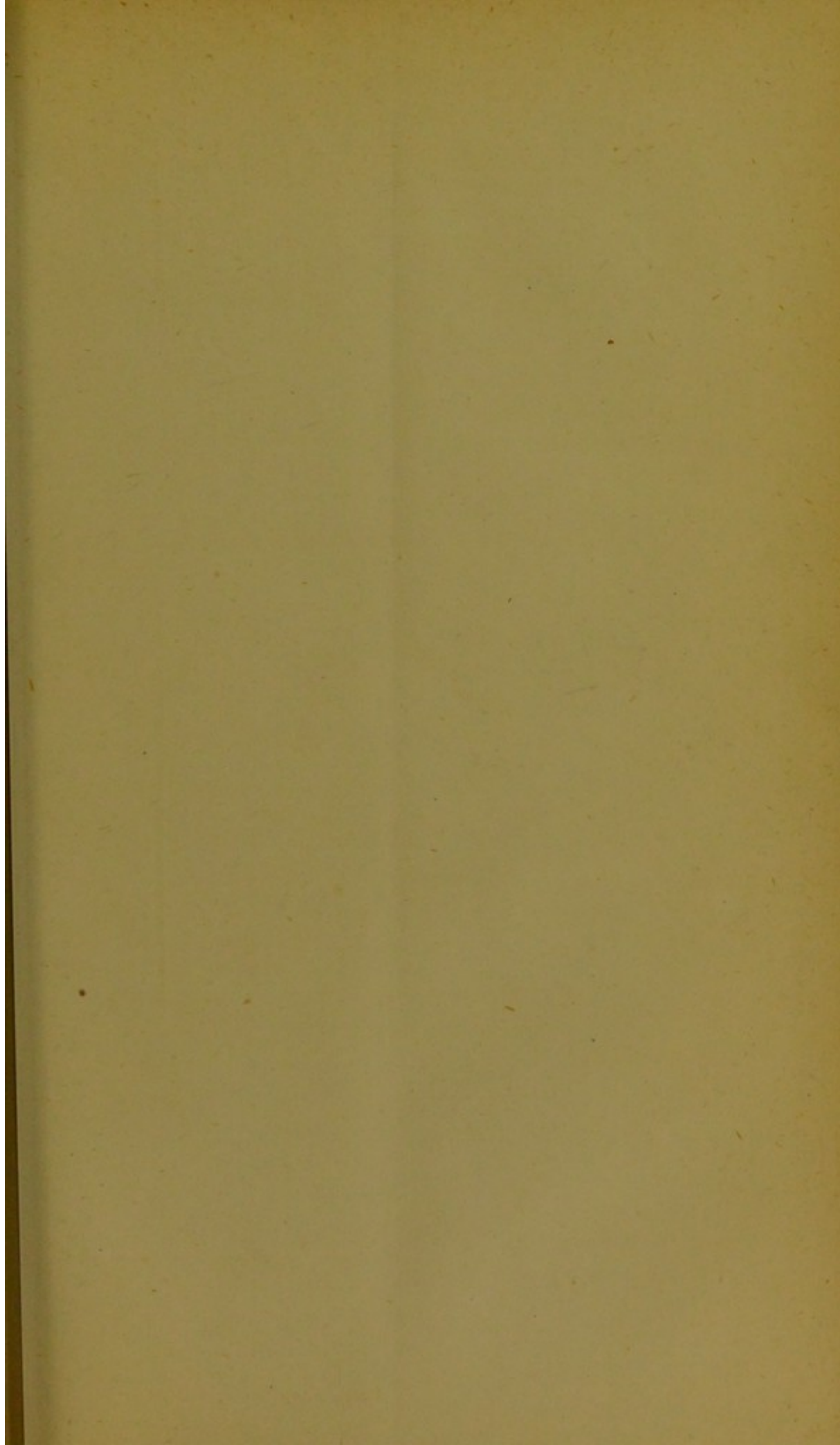
AGES.	CARIES.										Stumps.	Exostosis.	Necrosis.	Inflammation, dental periosteum.	Alveolar abscess.	Space for canines.	Neuralgia, &c.	Loose, from absorption of alveoli and gums.	JAWS.												
	Masticating surface.		Anterior surface.		Posterior surface.		Buccal surface.		Lingual surface.																						
	M	F	M	F	M	F	M	F	M	F																					
Under 15	1		1	5							2	1																			Upper.
Between 15 and 20		1	2	2	3	1					4	5																			Lower.
			4	4	4	6				1	4	3																			Upper.
20 " 25			4	4	4	6					4	3																			Lower.
			1	2	2						6	1																			Upper.
25 " 30			1	1	1						2	3																			Lower.
			2	3			1		1		2	3																			Upper.
30 " 35			2	1		2					2	3																			Lower.
																															Upper.
35 " 40				1	2	3					1	1																			Lower.
																															Upper.
40 " 50			1		2	1																									Lower.
																															Upper.
50 " 60											3	1																			Lower.
																															Upper.
60 " 70											1																				Lower.
												1																			Upper.
70 and upwards ...																															Lower.
																															Upper.
Total number	3	3	14	13	22	14	1				3	28	22													6	7				

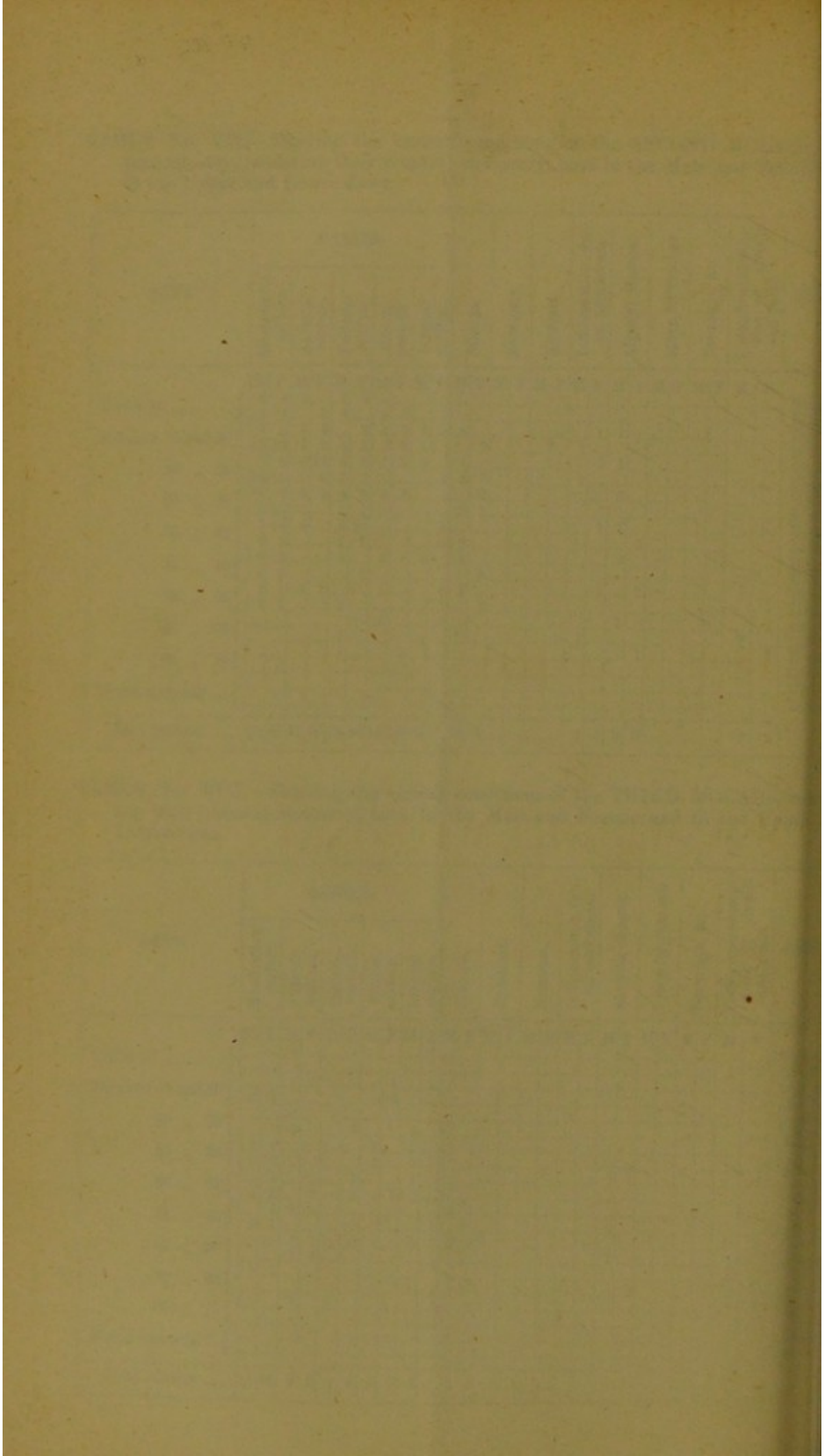
TABLE No. V.—Showing the various conditions of the SECOND BICUSPIDS, rendering their removal necessary, both in the Male and Female, and in the Upper and Lower Jaws.

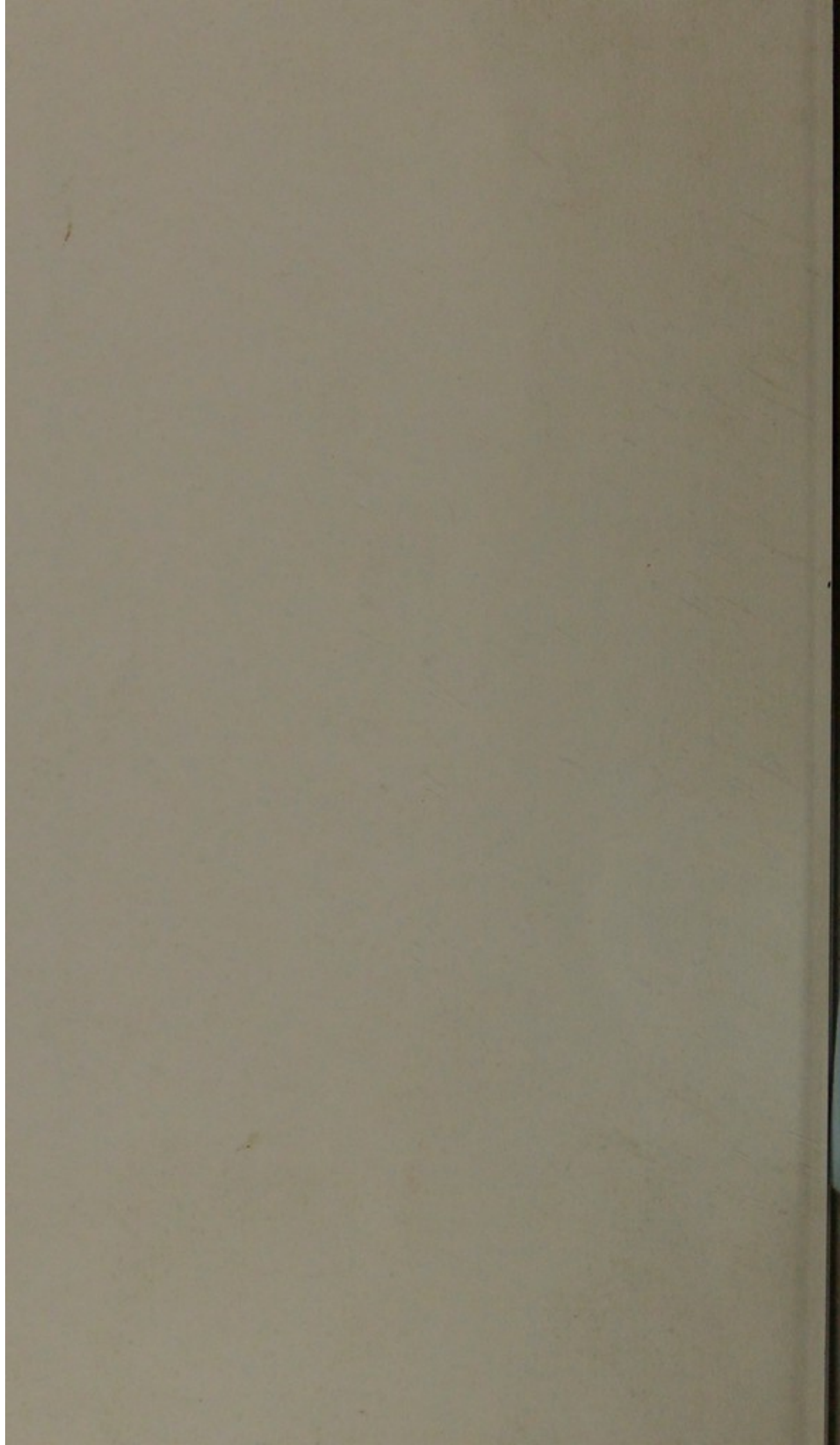
AGES.	CARIES.										Stumps.	Exostosis.	Necrosis.	Inflammation, dental periosteum.	Alveolar abscess.	Space for canines.	Neuralgia, &c.	Loose, from absorption of alveoli and gums.	JAWS.					
	Masticating surface.		Anterior surface.		Posterior surface.		Buccal surface.		Lingual surface.															
	M	F	M	F	M	F	M	F	M	F														
Under 15 .....	...	...	2	1	3	...	...	...	...	...	1	...	...	...	...	...	...	...	Upper.
Between 15 and 20	1	...	5	1	1	...	...	...	...	...	4	...	...	...	...	...	...	...	Lower.
	2	5	4	7	5	3	...	...	...	...	1	...	...	...	...	...	...	...	Upper.
20 " 25 .....	...	...	8	5	8	2	...	...	...	...	4	3	...	...	...	...	...	...	Lower.
	2	...	3	1	7	5	...	...	...	...	3	2	...	...	2	1	...	...	Upper.
25 " 30	1	...	1	1	1	4	...	...	...	...	4	...	...	1	1	...	...	...	Lower.
	...	...	1	...	1	2	...	...	...	...	8	...	...	...	...	...	...	...	Upper.
30 " 35 .....	...	...	...	1	...	2	...	...	...	...	4	6	...	...	...	3	...	...	Lower.
	...	...	1	1	1	1	...	1	...	...	1	...	...	1	...	1	1	...	Upper.
35 " 40 .....	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	Lower.
	...	...	2	...	1	...	...	...	...	...	3	...	...	...	...	...	...	...	Upper.
40 " 50 .....	...	...	1	...	...	...	...	...	...	...	2	...	...	...	1	1	...	...	Lower.
	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	Upper.
50 " 60 .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	Lower.
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Upper.
60 " 70 .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Lower.
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Upper.
70 and upwards .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Lower.
Total number	6	5	27	30	29	19	2	1	16	32	3	2	6	2	1	3	1

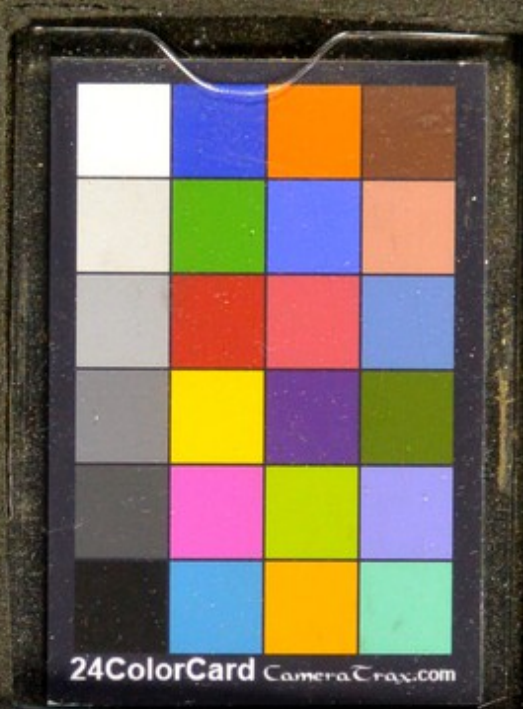
TABLE No. VI.—Showing the various conditions of the FIRST MOLARS, permanent Teeth only, rendering their removal necessary, both in the Male and Female, and in the Upper and Lower Jaws.

AGES.	CARIES.																		JAWS.				
	Masticating surface.		Anterior surface.		Posterior surface.		Buccal surface.		Lingual surface.		Stumps.	Exostosis.	Necrosis.	Inflammation, dental periosteum.		Alveolar abscess.		Space for canines.		Neuralgia, &c.		Loose, from absorption of alveoli and gums.	
	M	F	M	F	M	F	M	F	M	F				M	F	M	F			M	F	M	F
Under 15	43	16	20	18	6	2	4	4	5	3	3	...	...	...	...	1	...	...	...	...	...	Upper.
Between 15 and 20	56	54	18	16	3	11	7	...	10	...	12	5	...	...	...	1	...	...	...	...	...	Lower.
	15	16	14	6	7	2	...	...	3	1	7	10	...	...	...	...	...	...	...	...	...	Upper.
20 " 25	17	27	17	13	6	16	1	2	...	1	4	5	...	...	1	...	2	...	...	...	...	Lower.
	10	12	15	7	2	4	5	...	1	...	10	6	...	...	1	...	...	...	...	...	...	Upper.
25 " 30	7	13	11	21	...	...	1	1	...	...	3	9	...	...	...	2	2	...	...	...	...	Lower.
	3	6	1	...	2	...	6	...	9	...	2	3	...	...	...	...	...	...	...	...	...	Upper.
30 " 35	11	2	1	5	12	...	2	2	4	5	3	...	...	...	...	1	...	...	...	...	...	Lower.
	2	2	...	...	...	5	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	Upper.
35 " 40	5	15	...	...	1	...	7	1	1	...	1	...	...	...	...	...	...	...	...	...	...	Lower.
	2	1	...	1	2	3	4	1	...	...	2	...	...	...	...	1	...	...	...	...	...	Upper.
40 " 50	2	1	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	Lower.
	4	3	2	5	3	2	...	...	1	3	10	9	...	2	...	2	1	...	...	...	...	Upper.
50 " 60	2	1	1	1	2	1	1	1	...	...	4	1	...	...	1	...	...	...	...	...	...	Lower.
	1	3	3	2	...	...	...	...	1	1	3	1	...	1	...	...	...	...	...	1	...	Upper.
60 " 70	1	1	...	...	...	...	2	...	5	4	6	...	...	2	...	...	...	...	...	2	1	Lower.
	3	1	...	...	1	...	...	...	...	4	5	1	...	1	...	...	...	...	...	...	...	Upper.
70 and upwards	2	Lower.	
	1	1	1	Upper.	
Total number	185	177	103	97	45	44	37	18	38	18	72	62	...	4	...	4	1	9	4	3	4









TABLE(S)
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