

14.1 Isotope tables

Human values and contexts (1)

Nr	Site	Period/Culture	Sample	Lable	Anatomy	Age/Sex	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Literature
1	Kudachurt	EBA, Maikop	Kud burial 1				-19,50	9,80	Hollund et al 2010, tab. 2
1	Kudachurt	MBA?	Kud burial 2				-19,00	11,80	Hollund et al 2010, tab. 2
1	Kudachurt 14	MBA-LBA	2331	031_1	Rib	F/middle adult	-12,58	8,20	own data
1	Kudachurt 14	MBA-LBA	2332	032_1	Rib	M/middle adult	-19,30	9,18	own data
1	Kudachurt 14	MBA-LBA	2333	032_2	Rib	M/young adult	-19,17	10,42	own data
1	Kudachurt 14	MBA-LBA	2334	038_1	Calotte	M > F/adult++	-19,35	9,55	own data
1	Kudachurt 14	MBA-LBA	2335	039_1	Rib	F/middle adult	-19,48	9,16	own data
1	Kudachurt 14	MBA-LBA	2336	040_1	Rib	M/middle adult	-19,28	9,50	own data
1	Kudachurt 14	MBA-LBA	2337	045_1	Rib	F/middle adult	-19,42	8,46	own data
1	Kudachurt 14	MBA-LBA	2338	047_2	Rib	n. d./old child	-19,38	8,86	own data
1	Kudachurt 14	MBA-LBA	2339	047_3	Rib	F > M/juv/young ad	-19,64	8,88	own data
1	Kudachurt 14	MBA-LBA	2340	047_4	Rib	n. d./infant	-19,41	12,88	own data
1	Kudachurt 14	MBA-LBA	2341	048_2	Calotte	M > F/juv/young ad	-19,58	9,52	own data
1	Kudachurt 14	MBA-LBA	2342	050_1	Rib	F/middle adult	-19,33	9,95	own data
1	Kudachurt 14	MBA-LBA	2343	059_1	Rib	M/middle adult	-19,01	10,15	own data
1	Kudachurt 14	MBA-LBA	2344	067_1	Rib	M/middle adult	-19,32	9,30	own data
1	Kudachurt 14	MBA-LBA	2345	072_1	Calotte	M > F/middle adult	-19,27	9,79	own data
1	Kudachurt 14	MBA-LBA	2346	073_1	Rib	n. d./infant	-19,29	11,59	own data
1	Kudachurt 14	MBA-LBA	2347	074_1	Rib	F/young adult	-19,32	9,41	own data
1	Kudachurt 14	MBA-LBA	2348	076_1	Rib	n. d./infant	-18,75	12,65	own data
1	Kudachurt 14	MBA-LBA	2349	076_2	Rib	M/young adult	-19,44	9,86	own data
1	Kudachurt 14	MBA-LBA	2350	070_2	Rib	F > M/young adult	-19,22	9,47	own data
1	Kudachurt 14	MBA-LBA	2351	081_1	Rib	F > M/young adult	-19,30	8,84	own data
1	Kudachurt 14	MBA-LBA	2352	087_1	Rib	M/middle adult	-19,34	10,23	own data
1	Kudachurt 14	MBA-LBA	2353	092_1	Rib	F > M/juv/young ad	-19,19	8,89	own data
1	Kudachurt 14	MBA-LBA	2558	075_1	Rib	M/middle adult	-19,45	9,52	own data
1	Kudachurt 14	MBA-LBA	2559	127_1	Rib	M/middle adult	-19,27	10,03	own data
1	Kudachurt 14	MBA-LBA	2560	129_1	Rib	n. d./old child	-19,32	10,02	own data
1	Kudachurt 14	MBA-LBA	2561	129_2	Fibula	n. d./juvenile	-19,49	9,76	own data
1	Kudachurt 14	MBA-LBA	2562	130_1	Rib	M > F/middle adult	-19,52	9,00	own data
1	Kudachurt 14	MBA-LBA	2563	134_1	Rib	F/young adult	-18,96	9,17	own data
1	Kudachurt 14	1938-1757	2564	174_2	Rib	M/young adult	-19,06	9,69	own data
1	Kudachurt 14	2199-2031	2567	182_2	Rib	n. d./old child	-19,60	9,39	own data
1	Kudachurt 14	MBA-LBA	2568	186_6	Rib	F/young adult	-19,06	9,57	own data
1	Kudachurt 14	MBA-LBA	2570	190_1	Rib	M > F/young adult	-19,51	10,00	own data
1	Kudachurt 14	MBA-LBA	2571	195_1	Rib	n. d./juvenile	-19,47	8,44	own data
1	Kudachurt 14	MBA-LBA	2572	197_1	Rib	F > M/young adult	-19,42	9,14	own data
1	Kudachurt 14	MBA-LBA	2573	203_1	Rib	n. d./juvenile	-19,64	9,59	own data
1	Kudachurt 14	MBA-LBA	2574	208_1	Femur, shaft	F/young adult	-19,70	8,26	own data
1	Kudachurt 14	MBA-LBA	2577	215_1	Rib	M/middle adult	-19,26	10,39	own data
1	Kudachurt 14	1946-1775	2842	186_1	Rib	M/young adult	-19,09	10,23	own data
1	Kudachurt 14	1946-1775	2843	186_4	Phalanx	n. d./old child	-19,38	9,46	own data
1	Kudachurt 14	1946-1775	2844	186_7	Rib	M/middle adult	-19,29	9,88	own data
1	Kudachurt 14	1946-1775	2568	186_6	Rib	F/young adult	-19,06	9,57	own data
1	Kudachurt 14	MBA-LBA	BZNK-082/2	186_1	rib	M/young adult	-19,24	11,28	Knipper et al 2018, tab. 9.2
1	Kudachurt 14	MBA-LBA	BZNK-083/2	186_2	mandible	M/young adult	-19,46	10,78	Knipper et al 2018, tab. 9.2
1	Kudachurt 14	MBA-LBA	BZNK-084/3	186_3	rib	n.d./young child	-19,32	10,45	Knipper et al 2018, tab. 9.2
1	Kudachurt 14	MBA-LBA	BZNK-085	186_4	metacarpal/tarsal	n.d./old child	-19,46	10,39	Knipper et al 2018, tab. 9.2
1	Kudachurt 14	MBA-LBA	BZNK-086/2	186_5	rib	M/middle adult	-19,07	10,87	Knipper et al 2018, tab. 9.2
1	Kudachurt 14	MBA-LBA	BZNK-087/2	186_6	phalanx	M/middle adult	-19,35	10,36	Knipper et al 2018, tab. 9.2
1	Kudachurt 14	MBA-LBA	BZNK-091/2	212_1	ulna	M/middle adult	-19,54	10,1	Knipper et al 2018, tab. 9.2

14.1 Isotope tables

Human values and contexts (2)

Nr	Site	Period/Culture	Sample	Lable	Anatomy	Age/Sex	$\delta^{13}\text{C}$	δN	Literature
2	Zaragizh	BA	Zar/1/2	1_2	?		-19,40	10,80	Hollund et al 2010, tab. 2
2	Zaragizh	BA	Zar/1/1	1_1	?		-19,30	10,80	Hollund et al 2010, tab. 2
3	Kabardinka 9	MBA, NCC	BZNK 115 2	KAB 1/1	rib	young child	-19,37	12,39	Knipper et al 2018, tab. 9.1
3	Kabardinka 9	MBA, NCC	BZNK 116 1	KAB 1/3	long bone	n.d.	-19,11	11,31	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 117 1	KAB 1/4	rib	n.d.	-19,43	10,61	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 118 1	KAB 1/6	rib	M/middle adult	-19,15	11,35	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 119 2	KAB 1/9A	rib	M/young adult	-19,25	11,24	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 119 3	KAB 1/9B	rib	M/middle adult	-19,25	10,86	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 120 2	KAB 1/10	rib	M/middle adult	-19,43	10,60	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 121 1	KAB 1/12	long bone	M/middle adult	-19,38	12,09	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 122 1	KAB 1/13	long bone	n.d.	-19,39	10,80	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 123 1	KAB 2/1b	rib	M/old adult	-19,39	11,60	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 124 2	KAB 2/2	rib	F/old child	-19,72	10,83	Knipper et al 2018, tab. 9.2
3	Kabardinka 9	MBA, NCC	BZNK 125 2	grave 2	long bone	M/middle adult	-19,61	10,53	Knipper et al 2018, tab. 9.2
4	Nezhinskaya	EBA, Maikop	Nez/5/13				-19,50	11,00	Hollund et al 2010, tab. 2
5	Zamankul		Zam/1/70	1_70			-19,60	10,20	Hollund et al 2010, tab. 2
5	Zamankul		Zam/1/70	1_70			-18,80	11,40	Hollund et al 2010, tab. 2
6	Baksanyonoyk	EBA, Maikop	Bak/2/5	2_5			-19,10	10,10	Hollund et al 2010, tab. 1
7	Zanozina Balka	EBA, Maikop	Zano1/1				-19,10	11,60	Hollund et al 2010, tab. 2
10	Klin Yar 3	EIA, Koban	KJ3-11				-14,60	11,40	Higham et al. 2010, tab. 3
10	Klin Yar 3	EIA, Koban	KJ3-172				-15,50	11,20	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-181			F	-15,00	11,30	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-187				-18,80	10,90	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-189			F	-14,60	10,60	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-190				-16,00	10,20	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-193				-15,50	10,90	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-206			M	-14,40	11,10	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-207				-15,00	9,63	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-208				-15,00	10,60	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-211				-15,80	10,90	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-214				-14,80	10,50	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-220			M	-14,10	10,50	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-236				-15,40	11,10	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-241				-15,90	11,50	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-277				-14,30	10,90	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-285				-14,00	10,20	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-315				-14,60	11,00	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-320				-13,40	10,70	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-323				-14,90	10,60	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-324			M	-14,60	10,40	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-349			M/middle adult	-14,30	10,90	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-355			M/middle adult	-16,00	12,00	Higham et al. 2010, tab. 4
10	Klin Yar 3	EIA, Koban	KJ3-377			n. d./old child	-14,60	10,80	Higham et al. 2010, tab. 4

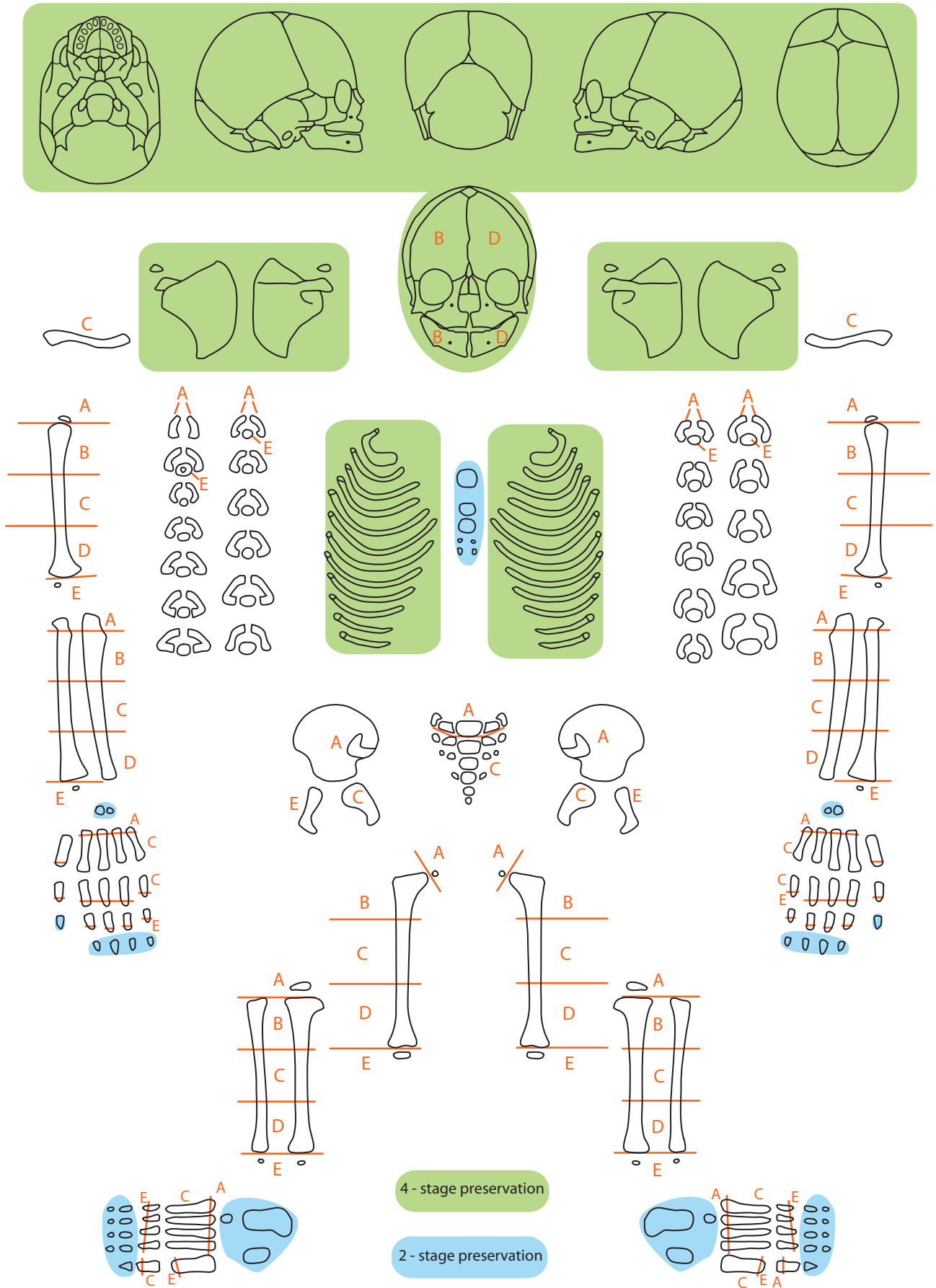
14.1 Isotope tables

Animal values and contexts

	Site	Period/ Culture	Sample	Label	Species	Anatomy	feeding pattern	d ¹³ C	δ ¹³ C		Liter- ature	Culture
8	Goryadchev- odskiy	EBA, Maikop		Gor 2/3/3	horse (equus c.)		herbivore	-19,50	7,4	3,3	EBA	Hollund et al 2010, tab. 1
8	Goryadchev- odskiy	EBA, Maikop		Gor 2/3/5	pig (sus d.)		ominvore	-19,50	5,8	3,1	EBA	Hollund et al 2010, tab. 2
8	Goryadchev- odskiy	EBA, Maikop		Gor 2/3/6	sheep (ovis aries)		herbivore	-20,00	5,1	3,1	EBA	Hollund et al 2010, tab. 2
9	Inozyemtsevo	EBA, Maikop		Ino 1/3/8	sheep (ovis aries)		herbivore	-19,00	5,5	3,1	EBA	Hollund et al 2010, tab. 2
9	Inozyemtsevo	EBA, Maikop		Ino 1/3/26	sheep/goat (ovis/capra)		herbivore	-19,30	5,9	3,2	EBA	Hollund et al 2010, tab. 2
3	Kabardinka 9	MBA, NCC	BZNK- 089	KAB 1/9c	sheep (ovis aries)	astragal	herbivore	-19,98	6,610	3,094	MBA	Knipper et al 2018, tab. 9.2
10	Klin Yar settlement	EIA, Koban		Sq 1 Bldg 1 Cow	cattle (bos)		herbivore	-19,00	7,8		EIA	Higham et al. 2010, tab. 4
10	Klin Yar settlement	EIA, Koban		Sq 1 Bldg 1 Ovicaprid	sheep/goat (ovis/capra)		herbivore	-19,70	6,5		EIA	Higham et al. 2010, tab. 5
10	Klin Yar settlement	EIA, Koban		Sq 1 Bldg 1 Cow	cattle (bos)		herbivore	-18,80	7,3		EIA	Higham et al. 2010, tab. 5
10	Klin Yar settlement	EIA, Koban		Sq 1 Bldg 1 Pig	pig (sus)		ominvore	-17,80	8,1		EIA	Higham et al. 2010, tab. 5
10	Klin Yar settlement	EIA, Koban		Sq 1 Bldg 1 Pig	sheep/goat (ovis/capra)		herbivore	-19,20	4,8		EIA	Higham et al. 2010, tab. 5
1	Kudachurt 14	MBA-LBA	2849	75	goat (capra)	Mandible	herbivore	-20,88	6,445	2,989	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2850	75	goat (capra)	Phalanx	herbivore	-19,60	4,290	2,986	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2852	127	goat (capra)	Calcaneus	herbivore	-19,30	7,120	3,051	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2853	137	goat (capra)	Femur, distal end	herbivore	-20,41	6,505	2,993	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2856	174	goat (capra)	Phalanx	herbivore	-20,29	4,513	3,025	1938- 1757	own data
1	Kudachurt 14	MBA-LBA	2859	186	goat (capra)	Femoral head	herbivore	-20,22	6,351	3,021	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2851	76	pig (sus d.)	?	ominvore	-19,73	6,212	3,017	1932- 1768	own data
1	Kudachurt 14	MBA-LBA	2854	140	pig (sus d.)	Radius	ominvore	-18,11	6,441	3,006	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2857	178	sheep (ovis aries)	Metatarsal	herbivore	-20,57	6,437	3,033	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2862	218.1	sheep (ovis aries)	Tibia	herbivore	-19,94	4,381	2,963	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2847	48	sheep/goat (ovis/capra)	Mandible	herbivore	-20,69	5,750	3,009	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2848	50	sheep/goat (ovis/capra)	Ulna	herbivore	-19,64	6,763	3,013	1879- 1692	own data
1	Kudachurt 14	MBA-LBA	2858	180	sheep/goat (ovis/capra)	MT/MC	herbivore	-20,05	6,404	3,016	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2860	197	sheep/goat (ovis/capra)	Femur, trochanter	herbivore	-20,58	6,194	3,047	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2861	200	sheep/goat (ovis/capra)	Pelvis	herbivore	-19,11	6,483	3,113	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2845	47	pig (sus d.)		ominvore	-20,18	5,972	3,010	1879- 1692	own data
1	Kudachurt 14	MBA-LBA	2846	47				-20,00	5,684	3,033	MBA- LBA	own data
1	Kudachurt 14	MBA-LBA	2855	145		Vertebra		-19,69	6,293	3,011	MBA- LBA	own data

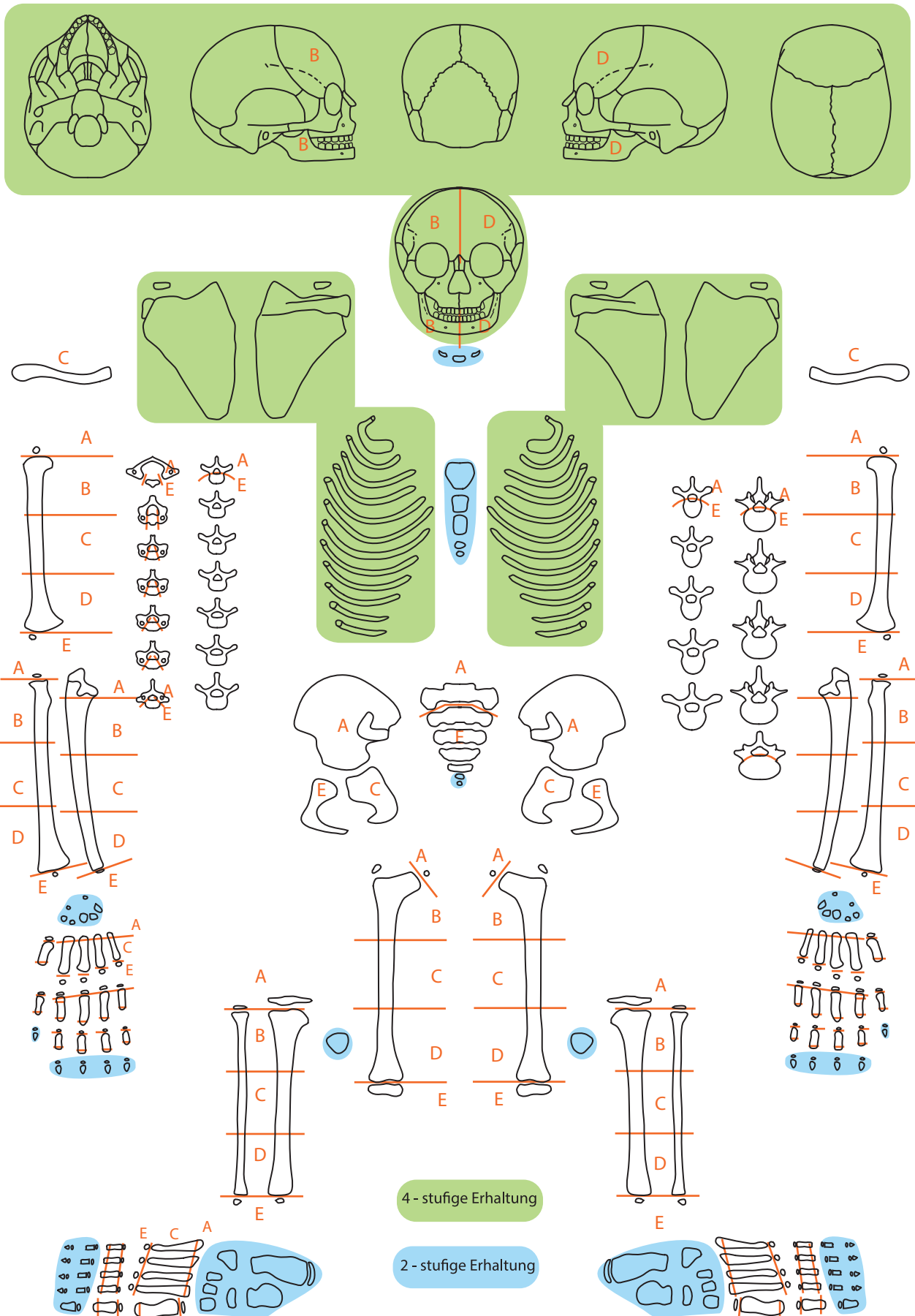
14.2. Recording schemes

Infans (0-3 years)



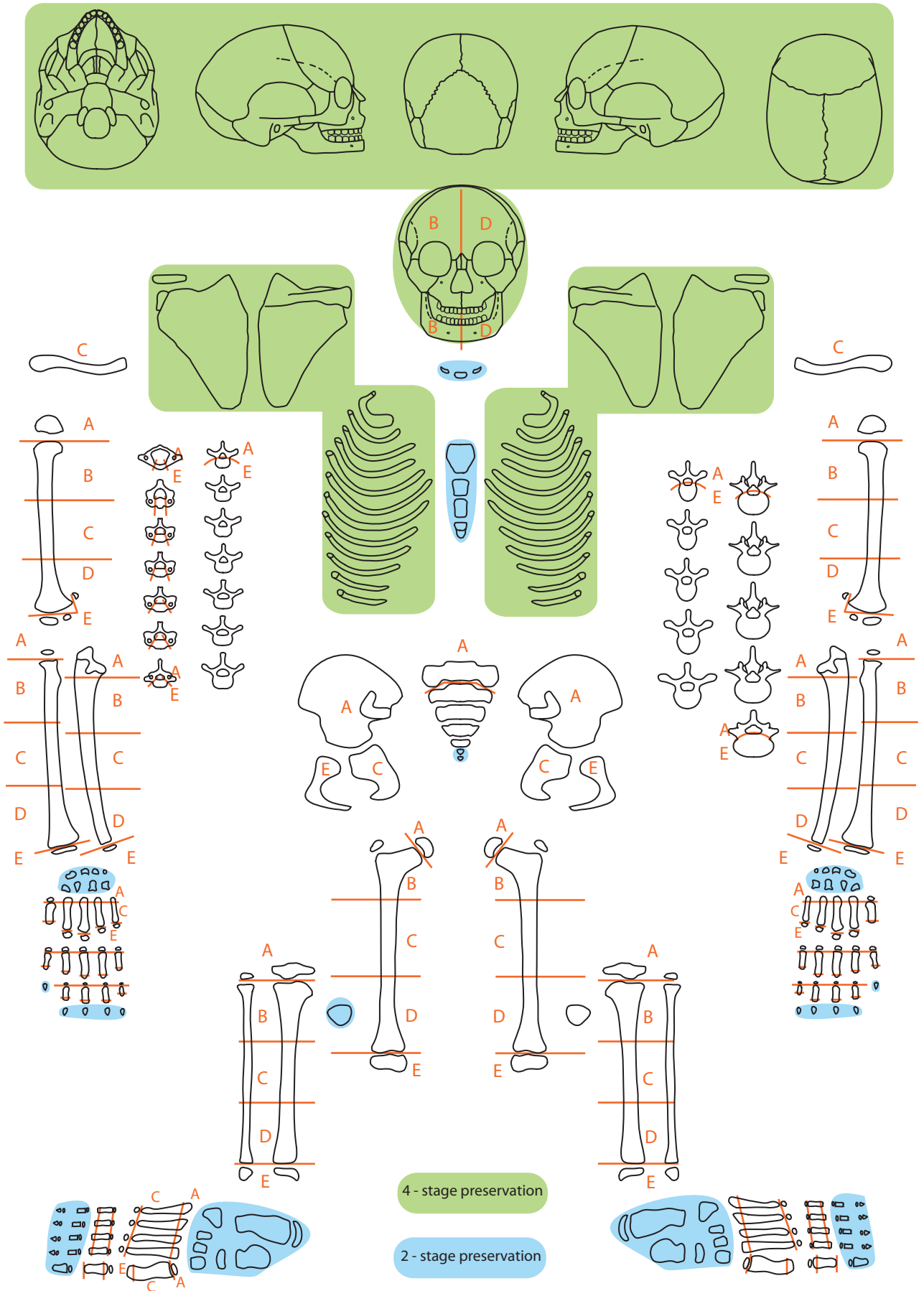
14.2. Recording schemes

Young child (4–6 years)



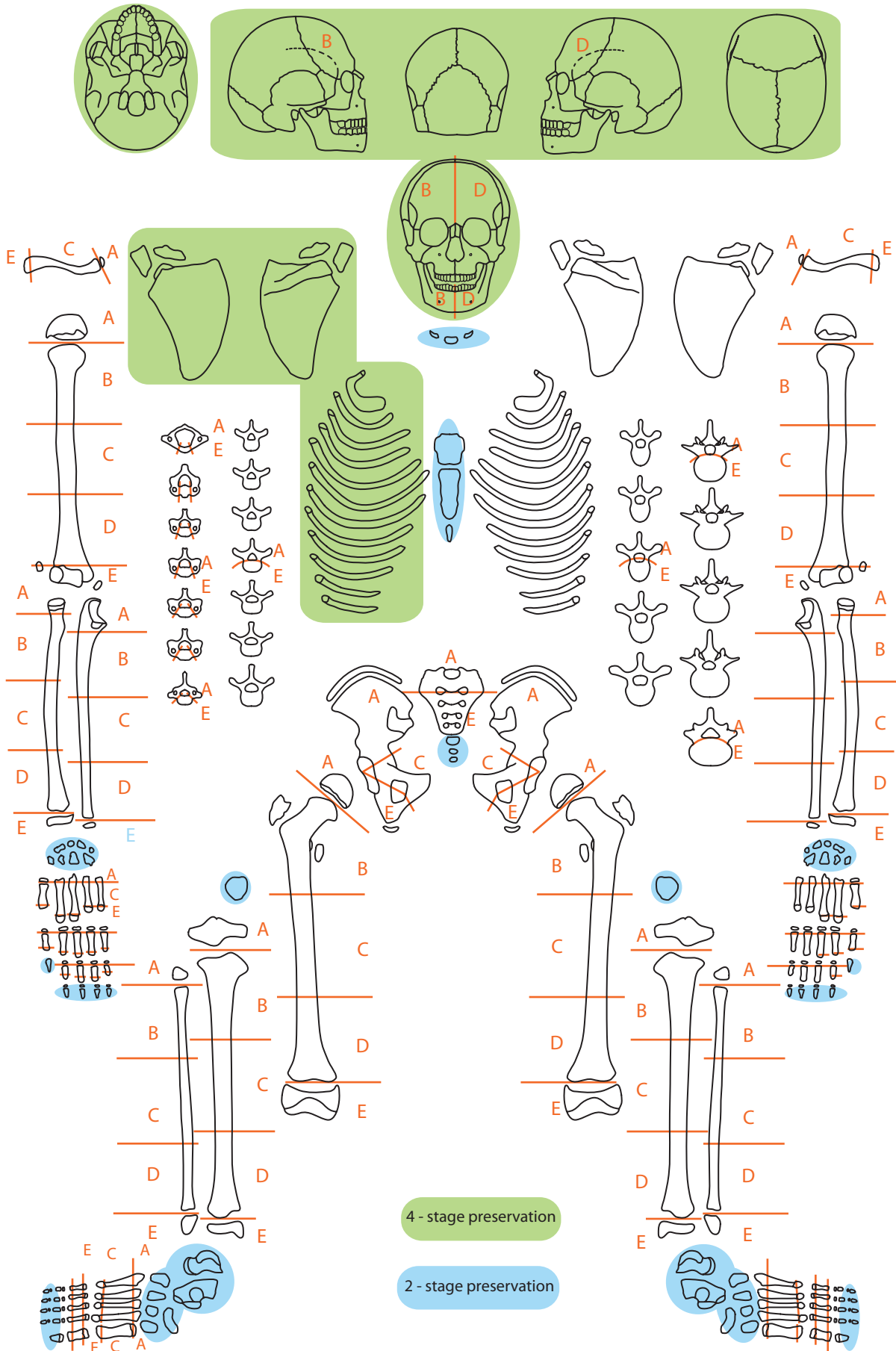
14.2. Recording schemes

Old child (7–12 years)



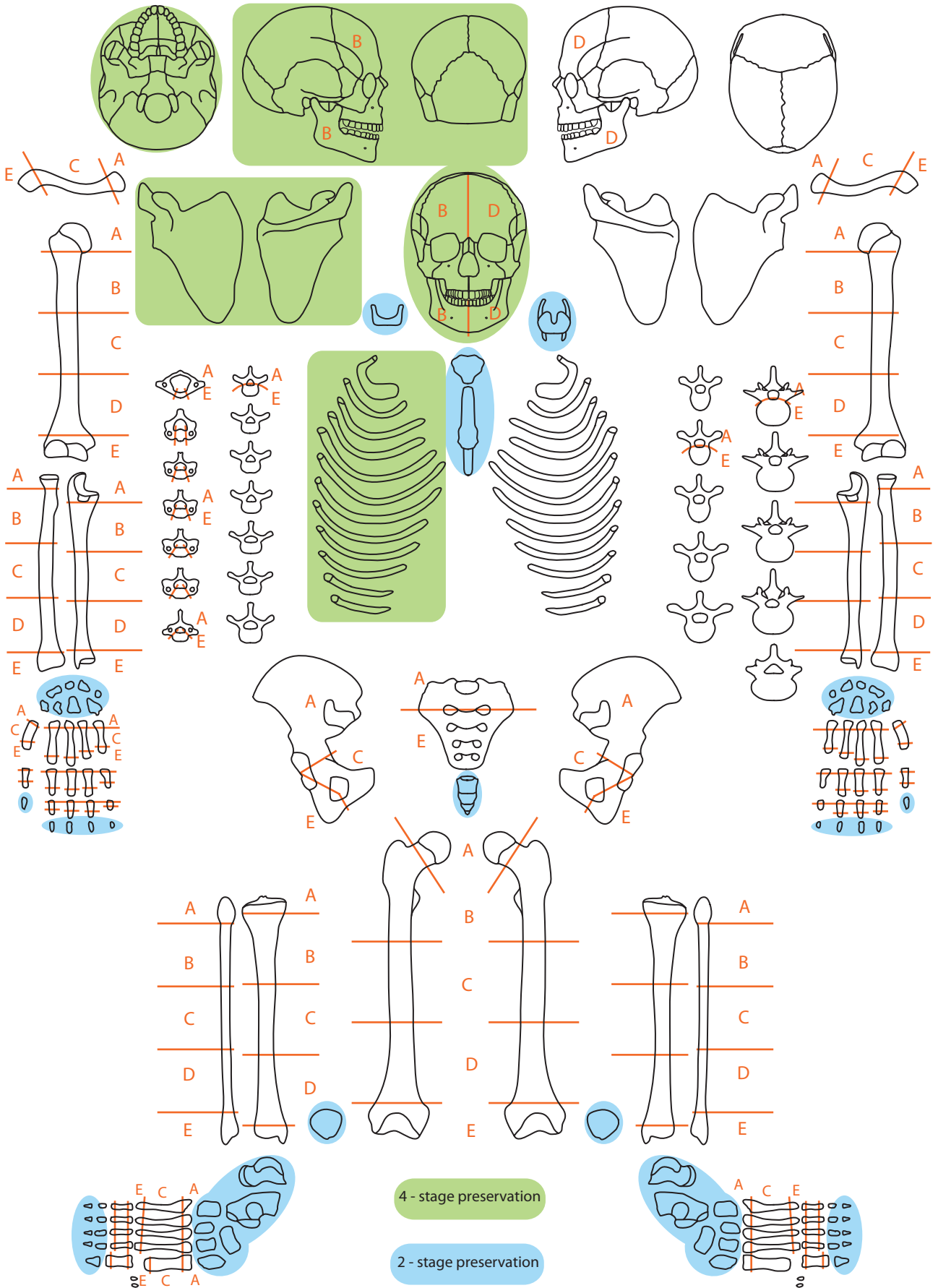
14.2. Recording schemes

Juvenile (12–20 years)



14.2. Recording schemes

Young-old adult (<20 years)



14.2. Recording schemes

Dental recording scheme (after Schultz 1988)

Object:	Date:
Kurgan/Sign.:	Grave Nr.:
Remarks:	

Teeth & jaw abnormalities:	f = alveole completely fused (f) = alveole not yet fused V = postmortem tooth loss XX = missing/destroyed, not determinable — = isolated tooth without alveolei D = devital tooth, intravital damaged ↓ = gap (Diastema, Trema)	() = development, still in alveole = in eruption, not yet in occlusion O = disposition questionable Ø = tooth was not disposed E = crown postmortal damaged / = not determinable — = healthy	<u>periodontal</u> Pi = parodontitis S = „pocket“ <u>hypoplasia</u> U = dots T = transversal	<u>apical processes</u> A = abscess/fis Z = cyst <u>newly formed</u> # = hypercementosis * = secondary dentin	C = crown N = neck R = root O = occusal M = mesial D = distal B = buccal/labial L = lingual/palat.
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Chipping																			
Hypoplasia																			
newly form.																			
Attrition																			
Caries																			
Calculus																			
Apical proc.																			
Periodont.																			
Tooth status																			
Periodont.																			
Apical proc.																			
Calculus																			
Caries																			
Attrition																			
newly form.																			
Hypoplasia																			
Chipping																			

Enamel hypoplasia: Age of origin	4 years +/- 1	
5 mo +/- 2 mo	5 years +/- 1	
7 mo +/- 2 mo	6 years +/- 2	
Birth +/- 2 mo	7 years +/- 2	
6 mo +/- 3 mo	8 years +/- 2	
9 mo +/- 3 mo	9 years +/- 2	
18 mo +/- 6 mo	10 years +/- 2.5	
1 year +/- 4 mo	11 years +/- 2.5	
2 years +/- 1	12 years +/- 2.5	
3 years +/- 1	15 years +/- 3	

Remarks:

Joint status	right	left	
Cap. mandibulae			
Fos. mandibularis			