Tell Arbid (Syria), seasons 1996–2002

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Tell Arbid is a middle-size archaeological site located in the Khabur basin, some 45 kilometers south-west of Qamishli. Archaeological excavations at this site were started in 1996 by Polish-Syrian expedition directed by Piotr Bieliński (Institute of Archaeology, Warsaw University) and from the beginning they had been focused on 3rd millennium and early 2nd millennium levels (cf. Bieliński 1997, 2003). During first seven seasons the remains of 84 buried individuals were discovered; sex and age distribution of most complete 67 skeletons is presented in the Table 1 below. Apart of the five samples, examined in Poland in 1999/2000 by Elżbieta Dabrowska, Piotr Jaskulski, and the present author, remaining bones and teeth were studied in September 2001 and September 2002 in the excavation house. Some skeletons found during those two seasons had been excavated by the present author and – in case of poor state of preservation - were treated with 5% polyvinyl acetate solution in acetone. Due to time limit only a basic description of the skeletons was done, including sex & age diagnosis, about 80 metric measurements, some 40 non-metric traits scores and evident pathologies. No traumas were observed.

| Chronology | 0–6 | 7–16 | adult M | adult ? | adult F | Σ |
|--|-----|------|------------|------------|------------|----|
| 3 rd millennium BCE | 5 | | | 3 | | 8 |
| Khabur (early 2 nd mill. BCE) | 7 | 3 | 3 | | 2 | 15 |
| Mitanni (middle 2 nd mill. BCE) | 1 | | | | 3 | 4 |
| Islamic (1^{st} and 2^{nd} mill. CE) | 7 | 4 | 2 | 7 | 1 | 21 |
| unknown | 6 | 5 | 1 | 7 | — | 19 |
| Σ | 26 | 12 | 6 | 17 | 6 | 67 |

Table 1. Tell Arbid. General sex and age distribution in the chronological sub-samples (most incomplete skeletons not included).

In general, the skeletons can be divided into four different chronological sub-samples (see the **Table 1**). In all periods the number of infants and adults is virtually equal and greater than the number of older children. Such age distribution is expected for a pre-industrial population.

The health status of the local population seems to be quite high. Enamel hypoplasia was observed in teeth of six individuals, without any clear chrono-

logical or sex pattern, but all of them had died before their 25th year. In spite of small sample size this may suggest that the enamel defects were associated with early deaths. Only ten cariotic teeth were observed, also without any evident pattern. As many as in five cases there were cavities in deciduous dentition of 6–8 years old children.

Three most interesting graves were discovered in 2001. Two were dated to the Khabur period (the beginning of the 2nd millennium BCE), and one dated to the Mitanni period (middle of the 2nd millennium). First of these burials, D–30/42–G1, was located near the surface and exposed to strong erosion. Bones of a 35–40 years old male individual were at least partially disarticulated and some could have been crushed *post mortem*. The left side of a rather long cranium, although cracked in many places and strongly eroded, was excavated in whole together with the almost complete mandible and some parts of other bones.

The second interesting Khabur grave was discovered in the area S-7/55, near the top of the tell. It consisted of two chambers, numbered as G8 and G9. The chamber G9 contained remains of a young woman (20–25 years), laid in the anatomical position and well preserved, although facial and base parts of the cranium as well as both hands were damaged or not found. In the chamber G8 there were completely disarticulated and mixed bones of four individuals together with animal remains, possibly of a sheep. The bones were heaped along the eastern wall of the chamber. It is likely that their distribution did not result from four succeeding burials, when the older remains were moved to make the space for new ones, but rather from the transportation of bones from other place. Some bones had been broken during such manipulation, some were missing.

The most complete skeleton (G8/1) belonged to a 40–45 years old woman. She was rather short and gracile. The second individual (G8/2) was a 20–25 years old male. His skeleton was also rather complete. The third skeleton (G8/3)belonged to an older child with almost all permanent teeth already erupted. The last individual (G8/4) was a 25–30 years old robust female whose cranium has been crushed into pieces and mixed together with other bones.

The third grave of special interest was excavated in the Mitanni layer of the area SA-37/54. It was abundant in grave goods and contained one well preserved and complete skeleton of a 25–30 years old woman. The body was found in the anatomical position, facing north, with bended legs and arms. The cranium was almost complete, except some fractures in both squamous parts of temporal and in parietal bones. The crowns of both M_2 were broken on their medial sides; the right one had a small cariotic lession between the cusps. LP_2 had been missing *ante mortem*.

Tell Fecheriye (Syria), season 2001

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Tell Fecheriye is large archaeological site (ca. 90 hectares) located in the suburban area of Ras al-'Ain close to the point where Khabur crosses the Syrian-Turkish border. During the excavations undertaken in 2001 by German-Syrian expedition directed by Alexander Pruss from Ludwigs-Maximilians Universität in Munich (Pruss and Bagdo 2002), the remains of one individual (B.1) were found in a mudbrick cist dated to the Iron Age (9–8th c. BCE). The bones, stored in the Regional Direction of Antiquities in Hassake, were studied in September 2002.

1. State of preservation. Only a few bones were preserved, including mandible reconstructed from four pieces, fragments of at least four thoracic vertebrae from various parts of spine, both patellae, bones of both feet, including right talus, left calcaneus, left cuboid and cuneiform, both phalanges of right big toe, four phalanges of the 2^{nd} row and one broken metatarsal. All teeth of mandible were originally present, including both M_{sr} but most of them were lost *post mortem*.

2. Sex and age. Due to poor state of preservation, reliable sex and age diagnosis was not possible. The bones were gracile, mental eminence 2/3 in 5–grade scale, obtuse mandibular angle – all this suggest rather female than male sex. Little wear of M_2 and M_3 gives a weak premise that the individual was young, less than 25/30 years old.

3. Measurements and non-metric traits. The measurements of mandible, talus, calcaneus, and patellae are presented below together with dental observations and measurements.

| Chin height = 30 , | Minimum ramus breadth = 31, |
|---|-----------------------------|
| Height of the mandibular body = 29 , | Maximum ramus breadth = 42, |
| Breadth of the mandibular body = 10 , | Maximum ramus height = 57, |
| Bigonial breadth = **94, | Mandibular length = **66, |
| Bicondylar breadth = $**107$, | Mandibular angle = 118°, |
| Calcaneus: Maximum length = 72, | Maximum breadth = 38 , |
| Talus: Maximum length = 52, | |
| Patella right: height = 37, breadth | = 40, |
| Patella left: height = 37, breadth = | 38. |

| Tooth | RI ₂ | LC ⁺ | RM_1 | LM ₁ | RM ₂ | RM ₃ | LM ₃ |
|--------------------|-----------------|-----------------|--------|-----------------|-----------------|-----------------|-----------------|
| Wear | 3 | 4 | 3/4 | 3/4 | 1 | 1 | 1 |
| Hypoplasia | +? | ++ | | | | | |
| Mesiodistal diam. | | | 10.1 | | 9.6 | 11.9 | 9.6 |
| Buccolingual diam. | | | 10.0 | | 8.8 | 11.3 | 9.4 |

Table 2. Tell Fecheriye. Dental observations and measurements (mandible).

Three non-metric traits were observed on mandible: single mental foramen on both sides, mandibular torus absent on both sides, mylohyoid bridge absent on both sides (a trace only on the upper edge of the canal).

4. Other observations. The body of one of middle thoracic vertebrae had a depression on one of surfaces, but it may be a *post mortem* deformation. The patellae were slightly assymetrical (cf. the measurements). Considerable dental calculus (0.5-1.0 mm) on the cemento-enamel junction has been observed in all teeth, especially on lingual side. Due to calculus the observation of hypoplasia in I₂ was difficult. Hypoplasia in canine is evident, from 0 up to 7 mm above the cemento-enamel junction. No caries was observed. M₃ are considerably assymetrical (cf. dental measurements): left regular, with 3 cusps, resembling M₂, right with 5½ cusps, 1½ cusps on buccal side, clearly separated from other cusps. Two large roots are close to one another, the line between roots continued in the enamel. Both M₁ were regular, with 4 cusps.

Tell Rad Shaqra (Syria), seasons 1994–1995

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Tell Rad Shaqra is small archaeological site in the Khabour basin, located some 20 kilometers south of Hassake. Between 1991 and 1995 it was excavated by a Polish expedition under direction of Piotr Bieliński from the Institute of Archaeology, Warsaw University, Poland (Bieliński 1995, 1996; Ławecka 1998). The excavators found remains of a well fortified village with quite rich households, dated to the middle of 3rd millennium BCE. During excavation seasons 1994 and 1995 also some human remains were found in the settlement context, most of them dated to the Early Dynastic III period. In all, there were more than 30 individuals, including 9 infants in jar burials, more than 15 children and six adults both in simple pits and in chamber graves.

Selected remains of 16 individuals from Tell Rad Shaqra were transported to Poland and stored in the Department of Historical Anthropology, Institute of Archaeology, Warsaw University. These are almost exclusively dental samples, that were preliminarily reviewed by the present author and Elżbieta Dąbrowska in 2000 and finally studied in 2006. In general, the teeth are in quite poor state of preservation, heavily dried and with roots often broken off. Some of them show possible traces of rodent teeth (specially one of canines of the individual 9).

There is only one adult individual, three foeti, two children in the age of 9 months, three 2/3 years old, and four between 3^{rd} and 6^{th} year of life. Full catalogue of studied individuals is included in the appendix. Age of children was diagnosed with the use of Ubelaker's dental development diagram (compare with germ formation scores in the **Tables 3** and 7). Teeth and few preserved bones were measured and described according to *Standards of Data Col*-

lection (Buikstra and Ubelaker 1994). All the taken measurements of deciduous dentition are presented in the **Tables 3–6** and the measurements of permanent germs and partially developed teeth in the **Tables 7–9**. The **Table 10** includes all the measurements of the only adult dentition.

The available sample is small but some very general conclusions may be drawn. First, the age pattern seems to be biased not only by the absence of adult individuals but also by the small number of youngest children in comparison to the 2–6 years age class. However, such a pattern obviously reflects the archaeologist's preference of teeth or well developed germs in sample collection.

The health status of the population from Rad Shaqra is difficult to assess. Deciduous teeth are sometimes clearly worn which suggests an averagely abrasive diet (**Table 4**). The frequency of dental caries in children is very low (**Table 5**), as expected in agricultural populations of Upper Mesopotamia (Sołtysiak 2006). Somewhat unexpected is the low frequency of enamel hypoplasia, which was measured in a 4-grade scale and only grade 1 (minimal horizontal lines) appeared to be sometimes present (**Table 8**). Mesiodistal and buccolingual diameters of deciduous teeth were measured (**Table 6**); these values will be included in larger sample from Upper Mesopotamia and analysed elsewhere. Also some partially developed permanent teeth were measured (**Table 9**) but only measurements of first molars are numerous enough to allow any statistical analysis.

Appendix: The catalogue of human remains from Rad Shaqra

1. Sector B, locus 5, grave 2. Teeth of 2 years old child together with three very small fragments of alveolus. There was partial loss of enamel observed in the buccal side of left upper and right lower canine.

2. Sector B, locus 13, grave 5, individual #1. Teeth of 2 years old child. In lm¹ there is a cavity 1x1 mm between cusps, more likely a postmortem damage than cariotic lesion. Only the buccal half of li² was preserved.

3. Sector B, locus 13, grave 5, individual #2. One tooth of 5/6 years old child.

4. Sector C, locus 33, grave 3. Teeth of 9 months old child.

5. Sector C, locus 47, grave 5. Teeth of 4 years old child together with mandibular body from lm_2 to rm_1 . Chin height 25, mandibular body breadth 11, left mental foramen 1. There were numerous but very weak hypoplastic lines on some teeth. The crown of rm_2 was badly damaged, from m_2 only central part of the crown preserved, perhaps this tooth was gnawed by a rodent.

6. Sector C, grave 12. Teeth of 4/5 years old child together with two very small fragments of maxillary alveolus, a fragment of mandibular condylar process and small fragment of first sacral vertebra. There were numerous but very tiny hypoplastic lines on some teeth. Roots of the teeth often were almost completely destroyed and thus the precise age diagnosis was difficult.

7. Sector C, locus 4. Teeth of 3–5 years old child.

8. Sector C, a jar beneath floor. Almost complete skeleton of a foetus, ca. 7 months in utero. State of preservation: parietal, frontal, occipital, temporal almost complete but fragmented, both occipital wings and base complete, both petrous parts of temporal complete, fragments of both maxillae, right mandible slightly broken, fragments of left one. Right humerus complete, left with broken both ends, both ulnae and radii complete, both femora with broken distal ends, right tibia with broken proximal end, left one complete, both fibulae with broken distal ends, both halves of atlas and axis complete, one cervical body, 7 thoracic/ lumbar bodies, 1 sacral body, 4 halves of C, 21 halves of T, 9 halves of L neural arches, 36 rib fragments (more than 2/3 present), fragment of right clavicle and broken left one, both broken scapulae, both broken iliac bones, both complete ischia, 8 metacarpals/metatarsals, one 1st first row phalanx of the foot. Measurements: clavicle: AP midshaft diameter 2, SI 2.5; humerus: maximum length 44r, distal end 11x4r, proximal end 18x16.5r, midshaft 4x3.5r; radius: maximum length 36.5, AP midshaft diameter 2, ML 2.5; ulna: maximum length 41r, AP diameter 3r, ML diameter 2.5r, physiological length 35.5r, minimum circumference 10.5r; ilium: height 22*r, breadth 19.5*r; ischium: length 10, width 6.5; femur: maximum length 51*, AP midshaft diameter 4, ML midshaft diameter 4, midshaft circumference 14; tibia: length 42, proximal end 9x7, distal end 6x5.5, AP at nutrient foramen 4.5, ML at nutrient foramen 4, circumference at nutrient foramen 14.5; fibula: midshaft 2x2; sphenoid: lesser wing length 17, width 9.5, body length 7.5, width 16; occipital: body length 11.5, width 9; mandible: length of the body 29r, width of the arc 12*r, full length 37r; nonmetrics: R two large and two small zygomatico-facial foramina; condylar canal L 1, R 0.

9. Sector D, locus 83, grave 15. Chamber grave dated probably to the Akkadian period. Teeth of 3 years old child. Enamel surface of upper and lower canines was a little bit irregular on the buccal side. Enamel of lm^2 was light green in colour, other molars heavily broken and perhaps gnawed by a rodent. Clear traces of rodent teeth are visible on rc_x (see **Fig. 1**).



Fig. 1. Tell Rad Shaqra. Traces of rodent activity in the canine of the individual 9.

10. Sector F, locus 2, grave 1. Teeth of 9 months old child. Only enamel fragment of ri, was preserved, with somewhat irregular buccal surface.

11. Sector F, grave 2. Teeth of an adult individual together with three alveolar fragments. All measurements are presented in the **Table 10**. There is cariotic lession in distal CEJ of P², 4x2.5 mm. There is considerable dental calculus and some enamel irregularity in M_2 and M_3 .

12. Sector X, pot filling. Five fragments of left scapula of a child 1–3 years old. Measurement of spine length: 58*.

13. Sector D, sq. 135. Only broken right tibia of a foetus. Measurements on the nutrient foramen: max 4.5, min. 4, circ. 14, proximal end 8x7.

14. Sector C, locus 40, grave 2, bones from a larger jar. Only few bones of a child ca. 1 year old are preserved: two average and 12 very small fragments of parietal, broken right humerus, originally ca. 9 cm long, midshaft measurements 9*x8* mm.

15. Sector C, locus 31, grave 1, bones from a smaller jar. Few bones of an infant: broken petrous part with mastoid process and very small fragment of squamous part of temporal bone, together with four fragments of neurocranium. Human bones were mixed with animal ones.

16. Sector C, locus 48, bones of a foetus from a pit beneath a floor. State of preservation: four very small fragments of neurocranium, fragment of left frontal with upper part of orbita, complete left parietal wing, broken left greater wing of a sphenoid, broken right petrous part of temporal, both complete zygomatic bones, two small fragments of maxilla, broken left mandible; right femur complete, left one with broken distal end, both tibiae with broken ends, complete right humerus, proximal half of left humerus, right radius with both ends slightly broken, proximal half of right ulna, fragment of fibula; right clavicle with broken lateral end, both broken scapulae; left slightly broken ilium, right ischium, both pubic bones; 17 rib fragments (less than 1/3 present), five bodies of cervical vertebrae, 14 bodies of T/L, three halves of cervical neural arches, 15 halves of T, 8 halves of L, one metacarpal/metatarsal. Measurements: clavicle: length 29*r, AP 2, SI 2; right humerus: length 42, proximal 6.5x5.5, distal 9.5x3, midshaft 3.5x3; right radius: length 34.5, midshaft 2x2; femur: length 45, proximal 9x7.5, distal 10x6, midshaft 4x4, circumference 14; tibia: length 39, proximal 7*x7*, AP at nutrient foramen 4, ML at nutrient foramen 4, circumference 14; ilium: height 21, breadth 17*; ischium: length 9, breadth 6.5; pubis: length 6; mandible: length of the body 24; nonmetrics: R large and small zygomatic foramina, L two small foramina; L condylar canal 1, L supraorbital notch 2, L supraorbital foramen 0.

| | Maxilla | | | | | | | | | | | | |
|----|----------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|-------|----------------|-----------------------|----------------|--|
| No | | | Rig | ht | | | Left | | | | | | |
| | \mathbf{M}^1 | m ² | \mathbf{m}^1 | c | i ² | \mathbf{i}^1 | \mathbf{i}^1 | \mathbf{i}^2 | с | \mathbf{m}^1 | m ² | \mathbf{M}^1 | |
| 1 | 6 | 10 | >11 | 12 | 13 | 14 | 14 | 13 | 12 | + | 10 | 6 | |
| 2 | 5 | >8 | | 10* | 12* | | 12 | | 10 | 11 | >8 | 5 | |
| 4 | | | | | | 10 | | | 5 | | 2 | | |
| 5 | | + | + | >13 | | + | >13 | | >13 | | >13 | 7 | |
| 6 | >7 | | + | + | | + | 14* | | | + | + | >7 | |
| 9 | 6 | 12 | + | | >10 | >11 | + | | 12/13 | + | + | 6 | |
| 10 | | 4/5 | 7 | 6 | 10 | 10 | 10 | 10 | | 7 | 4/5 | | |

Table 3a. Tell Rad Shaqra. Germ formation (deciduous dentition and M1).

Table 3b. Continued.

| | | Mandible | | | | | | | | | | | | |
|----|------------------|----------------|-----------------------|------|----------------|----------------|----------------|----------------|------|-----------------------|-----------------------|------------------|--|--|
| No | | | I | .eft | | | | | Righ | t | | | | |
| | \mathbf{M}_{1} | m ₂ | m ₁ | с | i ₂ | \mathbf{i}_1 | i ₁ | i ₂ | с | m ₁ | m ₂ | \mathbf{M}_{1} | | |
| 1 | | 10 | >11 | 12 | + | 14 | | 13 | 12 | + | 10 | 6 | | |
| 2 | 5 | >8 | 11 | 10* | | 12* | 12 | 12 | 10* | 11 | | 5 | | |
| 4 | | | | | 9 | 10 | 10 | 9 | 7 | | | | | |
| 5 | >7 | +* | + | | | | + | | + | + | | >7 | | |
| 6 | | | | | | | | | | + | | >7 | | |
| 7 | | | | | | 14 | | >11 | | | | | | |
| 9 | 6 | + | | >12 | 13 | 13/14 | 13/14 | | + | | + | 6 | | |
| 10 | | | | 5/6 | | 11 | | + | | + | 4/5 | | | |

| | Maxilla | | | | | | | | | | | |
|----|----------------|----------------|-------|----------------|----------------|----|----------------|------|----------------|-----|--|--|
| No | |] | Right | t | | | | Left | | | | |
| | m ² | \mathbf{m}^1 | c | i ² | \mathbf{i}^1 | i1 | i ² | с | \mathbf{m}^1 | m² | | |
| 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | | |
| 2 | | | 2 | | | 2 | | 1 | 1 | | | |
| 4 | | | | | 1 | | | | | | | |
| 5 | | 2 | 2 | | 3 | 3 | | 2 | | 1 | | |
| 6 | | 1/2 | 2 | | 3 | 3 | | | 1/2 | 1/2 | | |
| 7 | | | | | | | | | | | | |
| 9 | 1 | | | 1 | 2 | 2 | | 2 | 2 | 1 | | |
| 10 | | | | 1 | 1 | 1 | 1 | | | | | |

Table 4a. Tell Rad Shaqra. Dental wear degree (deciduous dentition).

Table 4b. Continued.

| | | Mandible | | | | | | | | | | | |
|----|-----------------------|----------------|------|----------------|----------------|-----------------------|----------------|------|-----------------------|-----------------------|--|--|--|
| No | | | Left | | | | | Righ | t | | | | |
| | m ₂ | m ₁ | с | i ₂ | i ₁ | i ₁ | i ₂ | с | m ₁ | m ₂ | | | |
| 1 | 1 | 1 | 1 | 2 | 2 | | 2 | 1 | 1 | 1 | | | |
| 2 | | 1 | 1 | | 2 | 2 | 1 | 1 | 1 | | | | |
| 4 | | | | | 1 | 1 | | | | | | | |
| 5 | | 1* | | | | | | 2 | 1* | | | | |
| 6 | | | | | | | | | 2 | | | | |
| 7 | | | | | | 2/3 | | 1 | | | | | |
| 9 | 2 | | 2 | 2 | 2 | 2 | | | | 2 | | | |
| 10 | | | | | 1 | | | | | | | | |

| | Mandible | | | | | | | | | |
|----|----------------|------------------|------|----------------|----------------|----------------|----------------|-------|------------------|-----------------------|
| No | | | Left | | | | | Right | | |
| | m ₂ | \mathbf{m}_{1} | с | i ₂ | \mathbf{i}_1 | \mathbf{i}_1 | \mathbf{i}_2 | с | \mathbf{m}_{1} | m ₂ |
| 1 | | | _ | _ | _ | | _ | _ | | |
| 2 | _ | _ | _ | | _ | _ | _ | _ | _ | |
| 5 | | | | | | | | _* | | |
| 6 | | | | | | | | | _* | |
| 7 | | | | | | _ | | _ | | |
| 9 | | | _ | _ | _ | _ | | | | |

Table 5. Tell Rad Shaqra. Dental caries (deciduous denition).

Table 5b. Continued.

| | | Maxilla | | | | | | | | | | |
|----|-----------------------|----------------|-------|----------------|----------------|----------------|----------------|------|----------------|-----------------------|--|--|
| No | | | Right | ; | | | | Left | | | | |
| | m ² | m ¹ | c | i ² | \mathbf{i}^1 | \mathbf{i}^1 | \mathbf{i}^2 | c | \mathbf{m}^1 | m ² | | |
| 1 | | | _ | _ | _ | _ | _ | _ | | | | |
| 2 | _ | | _ | | | _ | | _ | ? | _ | | |
| 5 | | _* | _ | | _ | _ | | _ | | _ | | |
| 6 | | _ | _* | | _ | _ | | | - | _ | | |
| 9 | _* | | | _ | _ | _ | | _ | _* | _ | | |

Table 6a: Tell Rad Shaqra. Measurements of deciduous teeth and M1 (maxilla, mesiodistal diameters).

| No | | Right | | | | | | | | | |
|-----|----------------|-----------------------|----------------|-----|----------------|----------------|--|--|--|--|--|
| INO | \mathbf{M}^1 | m ² | \mathbf{m}^1 | с | \mathbf{i}^2 | \mathbf{i}^1 | | | | | |
| 1 | 10.1 | 8.6 | 6.7 | 6.6 | 5.0 | 6.2 | | | | | |
| 2 | 10.7 | 9.0 | | 6.6 | | 6.2 | | | | | |
| 4 | | | | | | 6.0 | | | | | |
| 5 | 11.1 | | | | | | | | | | |
| 6 | 10.4 | | 8.2 | | | 6.3 | | | | | |
| 9 | 10.7 | | | | 5.2 | 6.0 | | | | | |
| 10 | | *8.4 | 6.9 | 6.4 | 5.0 | 6.0 | | | | | |

Table 6b. Continued.

| NT | Left | | | | | | | | | |
|----|----------------|----------------|-----|----------------|-----------------------|-------|--|--|--|--|
| No | \mathbf{i}^1 | i ² | с | \mathbf{m}^1 | m ² | M^1 | | | | |
| 1 | 6.2 | 5.0 | 6.6 | 6.8 | 8.5 | 10.2 | | | | |
| 2 | | | 6.7 | 7.1 | 9.0 | 10.8 | | | | |
| 4 | | | 7.0 | | | | | | | |
| 5 | 7.4 | | 6.8 | | 9.8 | 11.2 | | | | |
| 6 | 6.5 | | | 7.8 | 9.0 | 10.7 | | | | |
| 9 | 6.0 | | 6.9 | | 8.8 | 10.8 | | | | |
| 10 | 5.9 | 4.8 | | 6.8 | 8.6 | | | | | |

Table 6c. Tell Rad Shaqra. Measurements of deciduous teeth and M1 (maxilla, buccolingual diameters).

| No | Right | | | | | | | | | | |
|-----|-------|-----------------------|----------------|-----|----------------|----------------|--|--|--|--|--|
| INU | M^1 | m ² | \mathbf{m}^1 | с | i ² | \mathbf{i}^1 | | | | | |
| 1 | 11.1 | 9.7 | 8.3 | 5.7 | 4.4 | 4.6 | | | | | |
| 2 | 10.6 | | | | | 5.0 | | | | | |
| 4 | | | | | | 5.0 | | | | | |
| 5 | 12.0 | | | | | 5.3 | | | | | |
| 6 | 11.8 | | 8.8 | | | 5.2 | | | | | |
| 9 | 10.7 | | | | 5.2 | 6.0 | | | | | |
| 10 | | 9.0 | 8.1 | 5.6 | 4.8 | 4.9 | | | | | |

Table 6d. Continued.

| N. | Left | | | | | | | | | | |
|-------|----------------|----------------|------|----------------|-----------------------|------------------|--|--|--|--|--|
| INO - | \mathbf{i}^1 | i ² | с | \mathbf{m}^1 | m ² | \mathbf{M}^{1} | | | | | |
| 1 | 4.6 | 4.6 | 5.8 | 8.4 | 9.8 | 11.0 | | | | | |
| 2 | | | 5.6 | 7.9 | 9.4 | 10.6 | | | | | |
| 4 | | | *5.9 | | | | | | | | |
| 5 | 5.2 | | 5.1 | | 10.4 | 12.2 | | | | | |
| 6 | 5.3 | | | 9.1 | 9.9 | 11.7 | | | | | |
| 9 | 6.0 | | 6.9 | | 8.8 | 10.8 | | | | | |
| 10 | 4.9 | 4.6 | | 8.3 | 9.0 | | | | | | |

| No - | | Left | | | | | | | | | | | |
|------|------------------|----------------|-----------------------|-----|----------------|----------------|--|--|--|--|--|--|--|
| INO | \mathbf{M}_{1} | m ₂ | m ₁ | с | i ₂ | i ₁ | | | | | | | |
| 1 | | 10.1 | 8.0 | 5.4 | 4.4 | 3.8 | | | | | | | |
| 2 | 11.4 | 10.3 | 7.7 | 5.5 | | 4.2 | | | | | | | |
| 4 | | | | 5.8 | 4.1 | 3.8 | | | | | | | |
| 5 | 12.2 | | | | | | | | | | | | |
| 6 | 11.6 | | | | | | | | | | | | |
| 9 | 11.3 | | | 5.7 | 4.7 | | | | | | | | |
| 10 | | | | | | 3.4 | | | | | | | |

Table 6e. Tell Rad Shaqra. Measurements of deciduous teeth and M1 (mandible, mesiodistal diameters).

Table 6f. Continued.

| No | Right | | | | | | | | | | |
|-----|----------------|----------------|-----|----------------|----------------|-----------------------|--|--|--|--|--|
| INO | \mathbf{i}_1 | i ₂ | c | m ₁ | m ₂ | M ₁ | | | | | |
| 1 | | 4.4 | 5.5 | 8.2 | 10.1 | 10.8 | | | | | |
| 2 | 4.3 | 4.4 | 5.6 | 8.0 | | 11.3 | | | | | |
| 4 | 3.9 | 4.2 | | | | | | | | | |
| 5 | | | | | | 11.9 | | | | | |
| 7 | 4.0 | | 5.4 | | | | | | | | |
| 9 | | | | | | 11.3 | | | | | |
| 10 | | | | | *9.5 | | | | | | |

Table 6g. Tell Rad Shaqra. Measurements of deciduous teeth and M1 (mandible, buccolingual diameters).

| No - | | Left | | | | | | | | | | |
|------|------------------|-----------------------|------------------|------|----------------|----------------|--|--|--|--|--|--|
| NO | \mathbf{M}_{1} | m ₂ | \mathbf{m}_{1} | с | i ₂ | \mathbf{i}_1 | | | | | | |
| 1 | | 8.7 | 7.0 | 5.6 | 4.1 | 3.5 | | | | | | |
| 2 | 10.2 | 8.6 | 6.6 | 5.1 | | 3.8 | | | | | | |
| 4 | | | | 5.3 | 4.2 | 3.7 | | | | | | |
| 5 | 10.5 | | | | | | | | | | | |
| 6 | 10.4 | | | | | | | | | | | |
| 9 | 10.0 | | | *5.7 | 4.3 | 3.7 | | | | | | |
| 10 | | | | | | 3.7 | | | | | | |

| No - | Right | | | | | | | | | | |
|------|----------------|----------------|-----|-----------------------|-----------------------|-----------------------|--|--|--|--|--|
| INO | i ₁ | i ₂ | c | m ₁ | m ₂ | M ₁ | | | | | |
| 1 | | 4.1 | 5.6 | 6.9 | 8.6 | 9.9 | | | | | |
| 2 | 3.9 | 4.2 | 5.2 | 6.6 | | 10.0 | | | | | |
| 4 | 3.7 | 4.2 | | | | | | | | | |
| 5 | | | | | | 10.5 | | | | | |
| 7 | 3.9 | | 5.4 | | | | | | | | |
| 9 | 3.7 | | | | | 10.3 | | | | | |
| 10 | | | | | *8.0 | | | | | | |

Table 6h. Continued.

Table 7a. Tell Rad Shaqra. Germ formation (permanent dentition).

| | | Maxilla | | | | | | | | | | | | |
|----|-----------------------|-----------------------|----------------|-----|-------|----------------|----------------|-------|----|----------------|-----------------------|-------|--|--|
| No | | | Ri | ght | | | | | Le | eft | | | | |
| | M ² | P ² | \mathbf{P}^1 | С | I^2 | \mathbf{I}^1 | I ¹ | I^2 | С | \mathbf{P}^1 | P ² | M^2 | | |
| 1 | | | | 4 | 4 | 5 | | | | | | | | |
| 2 | | | | 4 | 4 | | 4/5 | 4 | 4 | | | | | |
| 3 | | 5 | | | | | | | | | | | | |
| 5 | 3 | 4 | 5 | | | 6 | 6 | | | | | | | |
| 6 | | | | >7 | | >9 | >9 | | >7 | | | | | |
| 9 | | | 5 | | 7 | 7 | 7 | 7 | 6 | | | | | |
| 10 | | | | | | 2* | | | | | | | | |

Table 7b. Continued.

| | | | | | | Man | dible | | | | | | |
|----|-----------------------|-----------------------|----------------|---|-------|------------------|----------------|-------|-------|----------------|-----------------------|-----------------------|--|
| No | | Left | | | | | | | Right | | | | |
| | M ₂ | P ₂ | P ₁ | С | I_2 | \mathbf{I}_{1} | I ₁ | I_2 | С | P ₁ | P ₂ | M ₂ | |
| 1 | | | | | | | | 5 | | 2/3 | | | |
| 2 | | | 2* | 4 | | | 4 | 4 | | | | | |
| 5 | 3 | | | 6 | | | | | | | | | |
| 6 | | | | | >9 | >9 | >9 | >9 | >7 | 4 | | | |
| 9 | | | | 6 | 7 | 8 | | 7 | 6 | | 5 | | |

| | | Maxilla | | | | | | | | | | | |
|----|-------|-----------------------|----------------|---|-------|----------------|-------|----------------|---|----------------|-----------------------|----------------|--|
| No | Right | | | | | | Left | | | | | | |
| | M^1 | P ² | \mathbf{P}^1 | С | I^2 | \mathbf{I}^1 | I^1 | \mathbf{I}^2 | С | \mathbf{P}^1 | P ² | \mathbf{M}^1 | |
| 1 | 0 | | | 0 | 0 | 0 | | | | | | 0 | |
| 2 | | | | 0 | 0 | 0 | | 0 | 0 | | | | |
| 3 | | 0 | | | | | | | | | | | |
| 5 | 1 | | 0 | | | 1 | 1 | | | | | 1 | |
| 6 | | | | 1 | | 1 | 1 | | 1 | | | | |
| 9 | | | | | 0 | 0 | 0 | 0 | 0 | | | | |

| Table 8a | Tell Rad | Shaara | Fnamel | hypoplasia | (permanent | dentition) |
|-----------|----------|---------|----------|------------|------------|------------|
| Tuble ou. | ICH Ruu | onuqua. | Litunici | nypopiusiu | permanent | actition |

Table 8b. Continued.

| | | Mandible | | | | | | | | | | | |
|----|----------------|-----------------------|-----------------------|-----|-------|-------|----------------|-------|----|----------------|-----------------------|------------------|--|
| No | | | Le | eft | | | | | Ri | ght | | | |
| | M ₁ | P ₂ | P ₁ | С | I_2 | I_1 | I ₁ | I_2 | С | P ₁ | P ₂ | \mathbf{M}_{1} | |
| 1 | | | | | | | | 0 | | | | 0 | |
| 2 | | | | 0 | | | 0 | 0 | | | | | |
| 5 | 1 | | | 0 | | | | | | | | 1 | |
| 6 | | | | | 1 | 1 | 1 | 1 | 1 | | | | |
| 9 | | | | 0 | 0 | 0 | | 0 | 0 | | | | |

Table 9a. Tell Rad Shaqra. Mesurements of permanent teeth.

| | | Maxilla | | | | | | | | | | | |
|----|-----------------|-----------------|---------|--------|-----------------|-----------------|-----------------|-----------------|--|--|--|--|--|
| No | | Mesic | odistal | | lingual | | | | | | | | |
| | RP ² | RI ² | RI^1 | LI^1 | RP ² | RI^1 | LI^1 | LI ² | | | | | |
| 1 | | 6.6 | 8.2 | | | | | | | | | | |
| 3 | 8.7 | | | | 6.9 | | | | | | | | |
| 5 | | | 9.2 | 9.3 | | *7.6 | *7.6 | | | | | | |
| 6 | | | 8.1 | 8.1 | | | *7.0 | *6.2 | | | | | |

| | | Mandible | | | | | | | | | | | | |
|----|-----------------|-----------------|---------|--------|-----|-----------------|-----------------|---------|--------|-----|--|--|--|--|
| No | | Μ | esiodis | tal | | | Bu | ccoling | gual | | | | | |
| | RI ₂ | RI ₁ | LI_1 | LI_2 | LC | RI ₂ | RI ₁ | LI_1 | LI_2 | LC | | | | |
| 1 | 5.5 | | | | | *5.1 | | | | | | | | |
| 5 | | | | | 6.9 | | | | | 8.3 | | | | |
| 6 | | 4.9 | 4.9 | 5.4 | | | *5.5 | *5.5 | *6.2 | | | | | |

Table 9b. Continued.

Table 10a. Tell Rad Shaqra. Individual 11, all teeth measurements.

| Measurement | RM ³ | RP ² | C ^x | \mathbf{LI}^{1} | LM^2 | LM ₃ | LM ₂ |
|--------------------|-----------------|-----------------|----------------|-------------------|--------|-----------------|-----------------|
| Wear | 3 | 5 | + | 2/3 | 3/4 | 2 | 3/4 |
| Hypoplasia | 1 | 0 | 2 | 1 | 0 | 1 | 1 |
| Caries | 0 | 2 | | 0 | 0 | 0 | 0 |
| Mesiodistal diam. | 9.1 | 6.7 | | 7.1 | 10.5 | 10.8 | *11.4 |
| Buccolingual diam. | 11.1 | 8.9 | | 6.4 | 11.5 | 10.0 | 10.1 |

Table 10b. Continued.

| Measurement | LM_1 | LP ₂ | LP ₁ | LC _x | LI ₂ | RI ₁ | RI ₂ |
|--------------------|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Wear | 4/7 | 3 | 2 | 3/4 | 4 | 5 | 4 |
| Hypoplasia | 0 | 0 | 0 | 2 | 1 | 2 | 1 |
| Caries | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mesiodistal diam. | 11.1 | 7.1 | 6.7 | 6.6 | 6.4 | | 6.2 |
| Buccolingual diam. | 10.5 | 8.7 | 7.4 | 8.5 | 6.8 | 6.0 | 6.8 |

Tell Rijim (Iraq), season 1985

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Tell Rijim is an archeological site in northern Iraq, located on the west bank of the Tigris, currently under water in the Eski Mosul Dam reservoir. Together with nearby Tell Raffaan it was excavated in 1984 and 1985 by a team directed by Piotr Bieliński (Institute of Archaeology, Warsaw University, Poland). Remains of many individuals were found at both sites, including a very well preserved skeleton from a Ninevite 5 grave, 7 individuals from a Parthian/Sasanian cemetery and 20 Islamic skeletons at Tell Rijim, as well as a skeleton from the Uruk period at Tell Raffaan (Bieliński 1992a, b; Kaim 1995). Unfortunately, only two bone and tooth samples from a Sasanian cemetery found at Tell Rijim in 1985 were taken to Poland. Currently they are stored at the Institute of Archaeology, Warsaw University.

1. Trench E: there were very few bone fragments preserved, including three small and 14 very small fragments of neurocranium, chiefly parietal bone, a very small fragment of left mandibular alveolus with root of P_2 , M_1 was lost ante mortem, P_2 lost post mortem. Three teeth were present; their measurements are included in the **Table 11a**.

2. Trench F: few human remains from the central grave. There were four small and 12 very small fragments of neurocranium, chiefly parietal. Lambdoid suture near lambda was only moderately obliterated (grade 1). There was left part of mandible preserved, with all teeth from P_1 to M_3 , but without ramus. The alveolar process was slightly reduced by 1-2 mm. Some traces of plant roots may have been observed on tooth surfaces. Measurements of the mandible: height of the mandibular body 30, breadth 10.5, single mental foramen, complete mylohyoid bridge, beginning 6 mm from the groove, 9 mm long. The gonion area was quite robust, which suggests male sex of this individual. Altogether, seven teeth were present; their measurements are included in the **Table 11b**.

| Tooth | Wear | Hyp. | Caries | MD | BL | Comments |
|-----------------|------|------|--------|------|-----|---|
| LM ₂ | 4/6 | 0 | 0 | 9.6 | 9.1 | dental calculus <1 mm |
| LM ₃ | 4 | 0 | 1 | 10.0 | 9.1 | lession 2x2 mm between cusps |
| RI_2 | 4/5 | 1 | 0 | 5.6 | 5.8 | very tiny horizontal hypoplastic lines |

Table 11a. Tell Rijim. Tooth measurements, Trench E.

| Tooth | Wear | Hyp. | Caries | MD | BL | Comments |
|-----------------|------|------|--------|-------|------|---|
| LM ₃ | 3/4 | 0 | 0 | 11.5 | 10.2 | enamel broken on distal side |
| LM_2 | 3/5 | 0 | 0 | *11.0 | 10.2 | enamel broken on distal side |
| LM_1 | 5/7 | 0 | 0 | *11.3 | 11.6 | enamel broken on distal/ buccal side |
| LP_2 | 4 | 0 | 0 | 7.1 | 8.5 | |
| LP_1 | 4 | 0 | 0 | 6.3 | 7.9 | |
| LM^1 | 7/9 | 0 | 0 | | | enamel broken on lingual side |
| LM^2 | 4/5 | 0 | 0 | 9.6 | 11.3 | enamel broken on buccal side |

Table 11b. Tell Rijim. Tooth measurements, Trench F.

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