

## CHAPTER NINE

### A RECONSIDERATION OF THE REMAINS IN THE FRENCH COLLECTION FROM QUMRAN

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Skeletal remains from the cemetery at Qumran were exhumed between 1949 and 1955 by Roland de Vaux. Professors Gottfried Kurth and Henri-Victor Vallois conducted the original anthropological analyses on these remains, although their investigations did not proceed beyond basic demographic descriptions. The bones disappeared shortly thereafter. Thus, the observation that “the real persons who lived, suffered, hoped, and whose mortal remains are found in rows in the three cemeteries around Qumran, reach us merely as voices”<sup>1</sup> held true for nearly fifty years.

In the absence of detailed osteological evidence, many theories emerged regarding the people of Qumran based on textual and archaeological records. Great hope was placed on the shoulders of those buried in the cemetery, with the expectation that if and when skeletal material became available, this debate would be laid to rest.

Sadly, the recovered remains did not rise to the challenge. Portions of several skeletons from the de Vaux excavations re-emerged in the late 1990s; however, little additional information could be gleaned from the bones despite considerable advances in the methods available to biological anthropologists. Incomplete exhumation, poor preservation, and varying curation conditions precluded the development of community profiles of diet, disease, or demography.

Nevertheless, detailed osteological analysis began

in 1998, first in Germany by Olav Röhrer-Ertl.<sup>2</sup> Analyses of remains housed in Paris and Jerusalem were conducted by our team from the University of Notre Dame in 1999 and 2000.<sup>3</sup> Multiple manuscripts have been produced and lectures given by both groups in the subsequent years. However, recently published correspondence between Professors Vallois and de Vaux, have caused us to re-evaluate some of our findings, as outlined in this chapter.

#### *Bio-Archaeological Context*

Bioarchaeology encompasses (but is not limited to) the reconstruction of ancient lifeways using mortuary analysis, material culture, skeletal biology, spatial patterning, faunal/botanical examination, relative and/or absolute dating methods, and taphonomy. As you will see in the sections to follow, many of these areas were explored, but the poor quality of the bones precluded complete analysis. The human remains from seventeen graves comprise the French Qumran collection (Table 1), including tombs 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 18, 19, A, and B. Since the rediscovery in 1999, their provenience has been determined; numerous dating methods attempted; and detailed metric and non-metric studies conducted.<sup>4</sup>

<sup>1</sup> F. G. Martínez and J. T. Barrera, *The People of the Dead Sea Scrolls: Their Writings, Beliefs and Practices* (New York: Brill, 1995): 47.

<sup>2</sup> O. Röhrer-Ertl, F. Rohrhirsch, and D. Hahn, “Über die Gräberfelder von Khirbet Qumran, Insbesondere die Funde der Campagne 1956. I: Anthropologische Datenvorlage und Erstauswertung Aufgrund der Collectio Kurth,” *RevQ* 19 (1999): 3–46 (*Jericho Und Qumran: Neues Zum Umfeld Der Bibel* [Eichstätter Studien 45; ed. B. Mayer; Regensburg: Pustet, 2000]: 165–226).

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<sup>4</sup> S. G. Sheridan, “Scholars, Soldiers, Craftsmen, Elites?: Analysis of the French Collection of Human Remains from Qumran,” *DSD* 9 (2002): 199–248; S. G. Sheridan, J. Ullinger, and J. Ramp, “Anthropological Analysis of the Human Remains from Khirbet Qumran: The French Collection,” in *Khirbet Qumrân et ‘Ain Feshikha II. Études d’anthropologie, de physique et de chimie* (Novum Testamentum et Orbis Antiquus, Series Archaeologica 3; ed. J.-B. Humbert and J. Gunneweg; Fribourg: Éditions Universitaires, 2003): 133–73.

TOMBS		DATE <sup>2</sup>	ORIGINAL INVESTIGATOR <sup>3</sup>	EXTANT COLLECTION	
<i>DeVaux's Sequence</i>	<i>Reeder Sequence</i> <sup>1</sup>				
Paris Collection	T3	697	1951	Vallois	possibly an innominate, sacrum, some cranial fragments
	T4	661	1951	Vallois	much of the cranium, several maxillary teeth, innominate, sacrum
	T5	526	1951	Vallois	cranium, 2 mandibles, several mandibular teeth, Innominates, sacrum
	T6	37	1951	Vallois	cranium, mandible fragment, several mandibular teeth
	T7	749?	1951	Vallois	cranium, innominate, proximal femurs, sacrum fragment
	T8	–	1951	Vallois	cranium, several maxillary teeth, innominate, sacrum
	T10	1085?	1951	Vallois	cranium, mandible, several mandibular teeth, innominate
	T11	959	1951	Vallois	cranium
Jerusalem Collection	T12	23	1953	Kurth	several mandibular teeth, cranium
	T13	55	1953	Kurth	sacrum and innominate
	T15	290	1953	Kurth	cranium, most mandibular and maxillary teeth, proximal femora, humerus, innominates
	T16a&b	360	1953	Kurth	2 crania, numerous teeth, 2 cervical vertebra, scapula and innominate fragments
	T17	131	1953	Kurth	no bones available
	T18	130	1953	Kurth	virtually the entire skeleton except the cervical vertebra and several phalanges
	T19	129	1953	Kurth	cranium, many teeth, innominates, sacrum fragments, lumbar vertebra, femur fragments
	TA	–	1955	Kurth	cranial fragments, tooth, clavicles, scapula, humeri, radius, innominate, femur, tibia, fibula
TB	–	1955	Kurth	cranial fragments, mandible, 5 cervical vertebra, hyoid, thyroid cartilage	

Table 1: Survey of the Remains Available for Study in the French Collection from Qumran

<sup>1</sup> H. Eshel, M. Broshi, R. Freund, and B. Schultz, “New Data on the Cemetery East of Khirbet Qumran,” *Dead Sea Discoveries* 9 (2002): 135–65.

<sup>2</sup> J.-B. Humbert, OP and A. Chambon, *Fouilles de Khirbet Qumrân et de Aïn Feshkha I.* (Göttingen: Vandenhoeck und Ruprecht and Editions Universitaires Fri Suisse, 1994).

<sup>3</sup> O. Röhrer-Ertl, F. Rohrhirsch, and D. Hahn, “Über die Gräberfelder von Khirbet Qumran, Insbesondere die Funde der Campagne 1956. I: Anthropologische Datenvorlage und Erstauswertung Aufgrund der Collectio Kurth,” *Revue de Qumran* 19 (1999): 3–46 (reprinted by B. Mayer (ed.), *Jericho Und Qumran: Neues Zum Umfeld Der Bibel* [Regensburg: Verlag Friedrich Pustet]), 165–226.

### Provenience

Provenience has been established for the individuals in the French collection (Table 2);<sup>5</sup> however, the sample size was too small, preservation too poor, and the remains too contaminated with preservative to permit meaningful reconstruction of community profiles. There were portions of only seventeen individuals available, and, in many cases, bones were literally held together by a paraffin preservative applied at the time of recovery.<sup>6</sup> These problems were compounded by incomplete exhumation, clearly indicated when photographs of whole skeletons *in situ* were compared with de Vaux's notations of minimal recovery of the available remains. In the majority of cases, only the crania and pelvis were removed from each grave.

The excavation pattern for the cemetery did not follow any established systematic archaeological sampling method, making the extant collection non-representative of the community interred therein. Magness observed a random pattern in the selection of graves, however, we would argue that the sheer dearth of excavated tombs precludes any statistically plausible representation.<sup>7</sup> Even de Vaux conceded this point in his statement: "we opened 43 [graves], and this number is quite inadequate to establish any valid statistical evidence."<sup>8</sup> Of the tombs remaining in the cemetery ( $n = 1178$ ),<sup>9</sup> we have accounted for less than 40 skeletons. This represents approximately 3% of the available graves, a figure further diminished by only partial exhumation of the skeletons. Fig. 9.1 illus-

trates the cemetery plan as mapped by Rosenberg and Myers's, surface survey,<sup>10</sup> with the tombs of the French collection highlighted, illustrating the paucity of the sample size.<sup>11</sup>

Although the cemetery is arguably one of the most immediately visible features at Qumran, little attention was given to exhuming the bones (fig. 9.1). Archaeologists of the time did not fully appreciate the promise of skeletal analysis. As Bush and Zuelebil observed, "Un-aware of the potential of human remains, many archaeologists view them as, at best, an irrelevance . . . whose excavation is time-consuming and which somehow does not constitute 'real' archaeology."<sup>12</sup>

Indeed, physical anthropology in the 1950s did not help this matter, with a myopic emphasis on the estimation of age, sex, and race. Those portions of the skeleton extracted from the graves clearly illustrate this bias. Today, a considerably more holistic approach is practiced by biological anthropologists interested in reconstructing daily activities, population movement, health and nutrition, female resiliency, childhood adaptability, etc. Sadly, the bones needed for these analyses were not extracted.

### Temporal Placement

Several methods were used to place the remains in a temporal context (Table 3).<sup>13</sup> Radiocarbon dating proved ineffective because the bones were too denatured for analysis. Carbon and nitrogen

<sup>5</sup> Provenience has been established using enclosed notes and packaging materials, photographic analysis, agreement with de Vaux's excavation notes, writing on the bones, and museum archives.

<sup>6</sup> R. Donceel, *Synthèse des observations faites en fouillant les tombes des nécropoles de Khirbet Qumrân et des environs: The Khirbet Qumran Cemeteries: A Synthesis of the Archaeological Data* (QC 10; Cracow: Enigma Press, 2002), fig. 10 illustrates the paraffin application during exhumation. Many thanks to Zdzislaw Jan Kapera for generously providing a copy of this book.

<sup>7</sup> ". . . the fact that de Vaux excavated random graves distributed throughout the cemetery means there is a good chance that this sample is demographically representative of the whole" J. Magness, *The Archaeology of Qumran and the Dead Sea Scrolls* (Grand Rapids, MI: Eerdmans, 2002): 172.

<sup>8</sup> R. de Vaux, *Archaeology and the Dead Sea Scrolls* (London: Oxford University Press, 1973): 128. Unfortunately, he then makes generalizations about the cemetery nonetheless.

<sup>9</sup> H. Eshel et al., "New Data on the Cemetery East of Khirbet Qumran," *DSD* 9 (2002): 135–65 (see p. 141 for the tomb count). De Vaux claimed "more than 1200" at the time of his excavations (see de Vaux 1973: 128).

<sup>10</sup> Originally published in Sheridan 2002: 214 and Eshel et al. 2002: 138.

<sup>11</sup> The survey was supported by funds from the Dorot Foundation. Additional support was provided by the Dead Sea Scrolls Foundation, the W. F. Albright Institute of Archaeological Research in Jerusalem, the Orion Center for the Study of the Dead Sea Scrolls and Associated Literature at the Hebrew University-Jerusalem, Scandinavium Films, and the University of Notre Dame's Institute for Scholarship in the Liberal Arts, the Graduate School, the Department of Theology and the Department of Anthropology. Particular thanks to Professors James VanderKam, Eugene Ulrich, Julia Douthwaite, Chris Fox, and John Cavadini (University of Notre Dame); Weston Fields (Dead Sea Scrolls Foundation); Sterling Van Wagenen (Florida State University); Ernest Frerichs and Michael Hill (Dorot Foundation); Esther Chazon (Orion Center); and Seymour Gitin and John Spencer (AIAR) for their help in securing these funds.

<sup>12</sup> H. Bush and M. Zuelebil, *Health in Past Societies: Biocultural Interpretations of Human Skeletal Remains in Archaeological Contexts* (British Archaeological Reports International Series 567; Oxford: Tempus Reparatum, 1991): 567.

<sup>13</sup> Sheridan 2002 and Sheridan et al. 2003.

TOMBS		MATERIALS AVAILABLE								
	<i>De Vaux's Sequence</i>	<i>Reeder Sequence</i> <sup>1</sup>	Photos A <sub>2</sub>	Photos B <sub>3</sub>	Writing on Bones	Masking Tape	Enclosed Notes	Writing on Box <sub>4</sub>	De Vaux's Notes	Additional Gravegoods
Paris Collection	T3	697	X	–	? <sup>6</sup>	–	–	–	X	–
	T4	661	X	–	X	–	–	X	X	X
	T5	526	X	X	X	–	–	X	X	–
	T6	37	–	–	X	–	–	X	X	–
	T7	749?	–	X	X	–	–	X	X	–
	T8	–	–	X	X	X	–	X	? <sup>7</sup>	–
	T10	1085?	–	–	X	–	–	X	? <sup>8</sup>	–
	T11	959	–	X	–	X	–	–	X	–
Jerusalem Collection	T12	23	X	–	–	–	–	X	X	–
	T13	55	X	–	–	X	–	X	X	–
	T15	290	X	–	–	X	–	X	X	–
	T16 a&b	360	X	–	–	X	–	X	X <sup>9</sup>	–
	T17	131	X	X	–	–	–	–	X	X
	T18	130	X	X	–	X	–	X	X	X
	T19	129	X	X	–	X	–	X	X	X
	TA	–	–	X	–	–	X	X <sup>10</sup>	? <sup>12</sup>	–
	TB	–	–	X	X	–	–	X <sup>11</sup>	? <sup>8</sup>	X

Table 2: Materials Used to Establish Provenience for the French Collection

“X” = *present*; “–” = *unavailable*; “?” = *questionable*

<sup>1</sup> H. Eshel, M. Broshi, R. Freund, and B. Schultz, “New Data on the Cemetery East of Khirbet Qumran,” *Dead Sea Discoveries* 9 (2002): 135–65.

<sup>2</sup> Please see Figure 9 in S. G. Sheridan, J. Ullinger, and J. Ramp, “Anthropological Analysis of the Human Remains from Khirbet Qumran: The French Collection,” in *The Archaeology of Qumran, Vol. II* (ed. J.-B. Humbert, OP and J. Gunneweg; Presses Universitaires de Fribourg, Suisse and the École Biblique et Archéologique Française, in press), 137.

<sup>3</sup> J.-B. Humbert, OP and A. Chambon, *Fouilles de Khirbet Qumrân et de Aïn Feshkha I.* (Gottingen: Vanderhoeck und Ruprecht and Editions Universitaires Fribourg Suisse, 1994) 217–24.

<sup>4</sup> Writing on outside of the box and/or the packing materials.

<sup>5</sup> As published in Humbert & Chambon, *Fouilles de Khirbet Qumran*, 346–49.

<sup>6</sup> These bones are marked with large blue wax pencil “3”s, but the notations differ from the India ink writing on most of the other bones. Also, these fragments were found in boxes marked as “Tomb 8”.

<sup>7</sup> Although de Vaux describes the grave, he does not discuss the presence of a skeleton, or the removal of any bones (Humbert & Chambon, *Fouilles de Khirbet Qumran*, 347). The skeleton *in situ* does however appear in the archived photographs.

<sup>8</sup> Tomb B is listed as synonymous with Tomb 10 in Humbert & Chambon, *Fouilles de Khirbet Qumran*, 347. The description states that the cranium and pelvis were removed. If this indeed refers to Tomb B, then: a) the excavators counted the cervical vertebra as part of the cranium and we are now missing the pelvis portions; b) this is a reference to Tomb 10; or c) the remains marked as Tomb B are not from the de Vaux Qumran collection.

<sup>9</sup> Portions of two skulls and pelvis were available for study. However, according to de Vaux’s notes, the skeletons were removed. Humbert & Chambon, *Fouilles de Khirbet Qumran*, 348.

<sup>10</sup> The box is labeled T9 (A).

<sup>11</sup> The box is labeled T10 (B).

<sup>12</sup> Tomb A is listed as synonymous with Tomb 9 in Humbert & Chambon, *Fouilles de Khirbet Qumran*, 347. The description states that the cranium and pelvis were removed. If this is a reference to Tomb A, then: a) the excavators failed to mention the removal of several postcranial bones; b) this is a reference to Tomb 9, which has to date not been rediscovered; or c) the remains marked as Tomb A are not from the de Vaux Qumran collection.

METHOD	SAMPLE	TOMBS																	FINDINGS		
		3	4	5	6	7	8	10	11	12	13	15	16a	16b	17	18	19	A		B	
Radiocarbon	bone	-	-	-	-	-	-	-	x	x	x	x	x	-	-	x	x	x	x	n/a	no discernable carbon signal
Dating ( <sup>14</sup> C)	wood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	n/a	severe paraffin contamination
C/N isotopes	bone	-	x	x	-	x	x	x	x	x	-	x	x	x	-	x	x	x	x	n/a	no preserved collagen
Fluoride Dating	bone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	random sorting by fluoride concentration
Typology	nails/spikes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	Roman (?)	based on shaft morphology
	pottery	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Roman	found at excavation, part of fill

Table 3: Dating Methods Used for the French Qumran Collection

isotope analysis further demonstrated the lack of preserved organic matter. Likewise, no discernable patterns were evident in the fluoride content of the bones, rendering even relative dating methods moot. Chronometric dating of the wood associated with some of the burials was hampered by heavy carbon contamination from the paraffin preservative used by the original excavators.<sup>14</sup> A dearth of associated grave goods further complicated temporal placement. The shape of the metal nails and spikes found in some of the tombs provided a possible Roman period placement; however, this, again, was inconclusive as no systematic nail typology exists for the southern Levant.<sup>15</sup>

### Demography

As is true when building any circumstantial case, the more information available, the more reliable the final outcome. Demographic analysis for the Qumran remains has benefited from the advent of many new methodologies, most of which was developed since the original estimates by Kurth and Vallois. Although study of complete skeletons would have significantly enhanced demographic reconstruction, those bones removed upon exhumation were among the best for age and sex determination. Unfortunately, postmortem degradation has reduced the utility of these indicators considerably.

Applying multiple demographic techniques (Tables 4, 5) has demonstrated that all of the indi-

viduals in the French collection were over thirty years of age at death, except the boy buried in Tomb 15. And, all were likely male, except for the woman in Tomb A, and possibly a second individual in Tomb 5.

### Reconsideration of the Paris Collection

Robert Donceel recently published his study of the cemetery-related archives at the École biblique et archéologique française de Jérusalem.<sup>16</sup> Included in this work are excerpts from correspondence between Vallois and de Vaux. These letters were quite revealing, and have forced a reconsideration of previous reconstructions for some of the individuals in the Paris collection.

Based on Professor Vallois's report to de Vaux, he felt there might have been as many as four commingled tombs in the Paris segment of the collection. Perhaps even more interesting, was his belief that, in each case, the tombs contained a man and a woman buried together. In a letter dated November 14, 1952, Vallois listed bones from Tombs 4, 5, 6, and 10 as possibly containing male and female burials.<sup>17</sup> These reconstructions were based upon the presence of bones that did not match the majority of remains from each grave and/or represented duplication of skeletal elements.

<sup>14</sup> However, Gunneweg reported at the Brown conference that he and his co-workers found a clean enough sample to establish a radiocarbon date.

<sup>15</sup> R. Nagy, "Nails and Metal Artifacts," *Michigan Archaeologist*

35 (1989): 177–80; L. Nelson, "Nail Chronology as an Aid to Dating Old Buildings" *History News* 24 (1968): 203–14.

<sup>16</sup> Donceel 2002.

<sup>17</sup> Donceel 2002: 36–37.

TOMBS		Pubic Symphysis I <sub>2</sub>	Pubic Symphysis II <sub>3</sub>	Auricular Surface <sub>4</sub>	Cranial Suture Closures <sub>5</sub>	Palate Suture Closure <sub>6</sub>	Epiphyseal Fusion <sub>7</sub>	Dental Eruption <sub>8</sub>	Dental Attrition I <sub>9</sub>	Dental Attrition II <sub>10</sub>	Dental Attrition III <sub>11</sub>	Dental Attrition IV <sub>12</sub>		
													<i>DeVaux's Sequence</i>	<i>Reeder Sequence</i> <sup>1</sup>
Paris Collection	T3	697	-	-	-	-	X	X	X	X	X	-		
	T4	661	-	-	X	-	-	X	X	-	-	-		
	T5[g]	526	-	-	-	-	-	X	X	X	X	-		
	T5[r]	526	-	-	-	-	-	-	X	X	X	X		
	T6	37	-	-	-	X	-	-	X	X	X	-		
	T7	749?	-	-	X	X	-	X	-	-	-	-		
	T8	-	X	X	-	-	-	X	X	X	-	-	-	
	T10	1085?	-	-	X	X	-	X	X	-	X	X	-	
	T11	959	-	-	-	-	-	X	-	-	-	-		
	Jerusalem Collection	T12	23	-	-	-	X	X	-	X	X	-	-	X
		T13	55	-	-	X	-	-	X	X	-	-	-	-
T15		290	-	-	-	-	X	X	X	X	X	X	X	
T16a		360	-	-	-	X	-	X	X	X	X	X	X	
T16b		360	-	-	X	-	-	X	-	X	X	X	X	
T17		131	-	-	-	-	-	X	-	-	-	-	-	
T18		130	X	X	X	-	X	X	X	X	X	X	X	
T19		129	X	X	-	-	-	-	-	X	X	X	X	
TA		-	-	-	X	X	X	X	X	X	-	-	X	
TB		-	-	-	-	-	X	-	-	X	X	X	X	

Table 4: Methods Used for Age Reconstructions for the French Collection

“x” = method used; “-” = method unavailable; “g” = gracile mandible; “r” = robust mandible

<sup>1</sup> H. Eshel, M. Broshi, R. Freund, and B. Schultz. “New Data on the Cemetery East of Khirbet Qumran,” *Dead Sea Discoveries* 9 (2002): 141.

<sup>2</sup> T. W. Todd. “Age Changes in the Pubic Bone I: The Male White Pubis,” *American Journal of Physical Anthropology* 3 (1921): 285–334.

<sup>3</sup> S. T. Brooks and J. M. Suchey. “Skeletal Age Determination Based on the Os Pubis: A Comparison of the Acsádi-Nemeskéri and Suchey-Brooks Methods,” *Human Evolution* 5 (1990): 227–38.

<sup>4</sup> C. O. Lovejoy, R. S. Meindl, T. R. Pryzbeck, and R. P. Mensforth. “Chronological Metamorphosis of the Auricular Surface of the Ilium: A New Method for the Determination of Age at Death,” *American Journal of Physical Anthropology* 68 (1985): 15–28.

<sup>5</sup> R. S. Meindl and C. O. Lovejoy. “Ectocranial Suture Closure: A Revised Method for the Determination of Skeletal Age at Death Based on the Lateral-Anterior Sutures,” *American Journal of Physical Anthropology* 68 (1985): 57–66.

<sup>6</sup> W. M. Bass. *Human Osteology: A Laboratory and Field Manual*. 4th ed. (Columbia, Missouri: Missouri Archaeological Society, 1995).

<sup>7</sup> J. E. Buikstra and D. H. Ubelaker. *Standards for Data Collection from Human Skeletal Remains* (Fayetteville, Arkansas: Arkansas Archaeological Survey, 1997).

<sup>8</sup> D. Ubelaker. “Estimating Age at Death from Immature Human Skeletons: An Overview” *Journal of Forensic Sciences* 32 (1987): 1254–63.

<sup>9</sup> B. H. Smith. “Patterns of Molar Wear in Hunter-Gatherers and Agriculturalists,” *American Journal of Physical Anthropology* 63 (1984): 39–56; B. H. Smith “Standards of Human Tooth Formation and Dental Age Assessment” In *Advances in Dental Anthropology*, ed. by M. Kelley and C. S. Larsen (New York: Wiley-Liss, 1991), 143–68.

<sup>10</sup> D. Brothwell, *Digging Up Bones*. 3rd ed. (Ithaca, New York: Cornell University Press, 1981).

<sup>11</sup> A. Miles. “Dentition in the Estimation of Age,” *Journal of Dental Research*, 42 (1963): 255–63.

<sup>12</sup> E. C. Scott. “Dental Wear Scoring Technique,” *American Journal of Physical Anthropology*, 51 (1979): 213–18.

<sup>13</sup> S. Molnar. “Human Tooth Wear, Tooth Function, and Cultural Variability,” *American Journal of Physical Anthropology*, 34 (1971): 175–89.

TOMBS		Mastoid Process	Browridge	Supraorbital Margin	Nuchal Crest	Temporal Line	Mental Eminence	Gonial Eversion	Genial Tubercles	Mandibular Breadth	Humerus Metrics	Ventral Arc	Subpubic Concavity	Ischiopubic Ramus	Ischiopubic Index	Sciatic Notch	Auricular Surface	Preauricular Sulcus	Sacrum Curvature	Sacrum Width	Femur Metrics	Linea Aspera	
<i>DeVaux's Sequence</i>	<i>Reader Sequence</i> <sup>1</sup>																						
Paris Collection	T3	697	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	
	T4	661	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	
	T5 [g]	526		X	X	X	X	X	X	X	X	-	-	-	-	X	X	X	X	X	-	-	
	T5 [r]	526		X	X	X	X	X	-	X	-	-	-	-	-	X	X	X	X	X	-	-	
	T6	37	-	X	-	-	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
	T7	749?	-	-	-	X	X	-	-	-	-	-	-	-	-	X	X	X	-	X	X	-	
	T8	-	X	X	X	X	X	-	-	X	-	-	X	X	X	-	X	-	X	X	-	-	
	T10	1085?	X	X	X	X	X	X	X	X	X	-	-	-	-	X	X	-	-	-	-	-	
	T11	959	-	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Jerusalem Collection	T12	23	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
		T13	55	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-
T15		290	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	-	X	-	
T16a		360	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
T16b		360	X	-	-	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
T17		131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
T18		130	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
T19		129	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	-	-	-	
TA		-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	X	X	X	X	X	
TB		-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	

Table 5: Sex Determination Methods Used for the French Qumran Collection

“M” = male; “F” = female; “x” = feature available for study; “-” feature unavailable; “g” = gracile mandible; “r” = robust mandible

<sup>1</sup> H. Eshel, M. Broshi, R. Freund, and B. Schultz. “New Data on the Cemetery East of Khirbet Qumran,” *Dead Sea Discoveries* 9 (2002): 141.

In the following section, we will outline whether our findings match Vallois’s interpretations and discuss the evidence he presented in his correspondence. We will begin with an overview of the confusion surrounding Tomb 3, which laid the foundation for our interpretation of Tomb 5 prior to finding Vallois’s report:

*Tomb 3/Tomb 8 commingling*

De Vaux reported the removal of portions of a cranium and pelvis for Tomb 3,<sup>18</sup> and the photo archive showed a complete skeleton with the head crushed by a stone.<sup>19</sup> Vallois, in part, confirmed this in his description of a “very deteriorated” cranium, although he made no mention of any

portion of the pelvis. He did provide a fairly specific age determination of twenty–twenty-five years old, a difficult determination using only the skullcap reported.<sup>20</sup>

As we began our work in Paris, we noted that there was no box labeled “Tombe 3” in the Musée de l’homme collection. However, several pieces in the two “Tombe 8” boxes (the only grave for which there were two trays of remains), were bones with a large “3” written in blue wax pencil or crayon. There were two sacra present—for one, the Tomb 8 designation was written in India ink on the thick paraffin preservative covering the bone, but underneath this waxy matrix was a large blue “3.” Figure 9.2 illustrates these discrepancies. An innominate had a large “T3” in the same blue lettering, and a

<sup>18</sup> *Fouilles de Khirbet Qumrân et de ‘Ain Feshka I: Album de photographies. Répertoire du fonds photographiques. Synthèse des notes de chantier du Père Roland de Vaux* (Novum Testamentum et Orbis Antiquus, Series Archaeologica 1, ed. J.-B. Humbert and Alain Chambon; Fribourg: Éditions Universitaires, 1994): 346.

<sup>19</sup> The École biblique et archéologique française de Jérusalem

maintains a series of albums with copies of the photographs known to them that are related to Qumran. For this photograph see #11434, album LV, p. 55. See also n. 40 below.

<sup>20</sup> “Crâne très détérioré, probablement mésocéphale. Sujet de 20 à 25 ans, certainement masculine,” see Donceel 2000; fig. 2 for a facsimile of Vallois is letter to de Vaux.

partial “3” (although possibly an incomplete “8”) was also visible on the broken margin of a large cranial fragment.

Based on the remains believed to represent Tomb 3, we were not able to corroborate Vallois’s specific age determination. In fact, the remnant sagittal suture on the cranial fragment was completely obliterated on the interior surface. This indicated (although only superficially given the incomplete nature of the skull) an individual somewhat older than Vallois’s estimate.<sup>21</sup> Even with the aide of the innominate and sacrum portions, we had only two additional general aging methods available and, therefore, could not be more specific than “adult” for this person. The innominate and sacrum were, however, quite useful for sex determination, thus, we were able to conclude that this was a male. A strong temporal line on the cranial fragment likewise fit the male pattern.

Interestingly, this person displayed lumbar sacralization—the complete or partial fusion of the fifth lumbar vertebra to the sacrum. Although there are no detrimental effects during life and the individual would have never known he suffered from this trait, it is rare enough that it would not have escaped Vallois’s notice<sup>22</sup> (fig. 9.3). Thus, the sacrum might not be a part of this tomb, despite the labeling—in which case, two distinctively different sacra were part of the Tomb 8 remains . . . which admittedly merely shifts the conundrum.

#### *Tomb 4*

De Vaux’s excavation notes only mentioned the removal of one very brittle cranium and pelvis

from this tomb,<sup>23</sup> and the photo archive contains two pictures of the skeleton *in situ*.<sup>24</sup> They both show a single interment, although the right side of the skeleton is obstructed from view by the wall of the loculus. Many of the bones in the pictures are disheveled, and features were not cleaned to the same degree that they are today for archaeological photography, making detailed analysis of the photographs difficult.

Vallois believed there might be two people in this grave.<sup>25</sup> For the first, he recorded a portion of the skull and innominate, from which he provided an estimated cephalic index, described marked tooth wear, determined age (forty years old), sex (male), and estimated “race.” He also described two other innominate portions as female.

The current remains included parts of two innominates, a sacrum, several pieces of skull, and a maxilla with eight intact teeth. One of these bones was reconstructed, presumably by a curator at the Musée de l’homme or by Vallois himself. The two innominates did appear somewhat different on initial inspection, largely due to the width of the sciatic notch.<sup>26</sup> However, this is an artifact of the alignment of the pieces during restoration (the glued bone has a slightly wider notch, a female feature). All other features appeared male. The two innominates were comparable in size, robusticity, and other morphological features,<sup>27</sup> suggesting they came from the same individual.

The sacrum in the “Tombe 4” box was notably yellower and lighter in weight than the other pieces. It was also far less encrusted with paraffin, which might explain both the coloration and weight

<sup>21</sup> The age determination technique using cranial suture closure was not available at the time of Vallois’s analysis. See: R. S. Meindl and C. O. Lovejoy, “Ectocranial Suture Closure: A Revised Method for the Determination of Skeletal Age at Death Based on the Lateral-Anterior Sutures,” *American Journal of Physical Anthropology* 68 (1985): 57–66.

<sup>22</sup> F. Bustami, “The Anatomical Features and Functional Significance of Lumbar Transitional Vertebra,” *Jordan Medical Journal* 23 (1989): 49–59. Bustami studied 340 sacra of modern Arab and Indian groups. Thirty-two (9.4%) showed evidence of unilateral sacralization and fourteen (4.1%) demonstrated bilateral sacralization.

<sup>23</sup> Humbert and Chambon 1994: 346.

<sup>24</sup> École biblique et archéologique française Catalogue: #11443 and #11444, album LVII, p. 57 (see nn. 19, 40).

<sup>25</sup> Vallois’s description of tomb 4 states: “2 sujets dont l’un n’est représenté que par un fragment du bassin: a) Crâne volumineux, épais, à voûte rhomboïde, nettement brachy-

céphale. L’indice céphalique, avec une longueur maximum prise un peu plus haut qu’à l’endroit normal par suite de la détérioration du crâne, donne le chiffre très élevé de 89. Si la longueur avait pu être mesurée exactement, il semble que l’indice aurait été voisin de 85. Toutes les saillies osseuses sont prononcées. La face est orthognathe et n’a rien de négroïde. Les dents sont bien usées. Sexe nettement masculin Age autour de 40 ans. Le type anthropologique est celui de la race alpine. Un morceau d’os iliaque de type masculin devait provenir du même sujet. b) 2 autres os iliaques de type féminin correspondent à un second sujet dont le crâne fait défaut,” (see Donceel 2002: fig 2; see also n. 20).

<sup>26</sup> A wide sciatic notch is a female trait, a narrow notch is associated with men.

<sup>27</sup> These features include retroauricular surface response, degree of auricular surface elevation, and arthritic response along the superior and inferior demiface of each bone.

differences. This was a highly friable bone as a result, and its broken edges crumbled at the slightest touch. The sacrum was narrow and very curved, both distinctly male features.<sup>28</sup> Small portions of both alae (articulation points with the innominates) were preserved and seemed to fit the aforementioned innominates to compose a single pelvic girdle.

But here the picture becomes somewhat more complicated. The right innominate was labeled “T4” with India ink on the paraffin, but underneath we found a “T3” in graphite written directly on the bone. A blue-pencil “5” was also present on the upper portion of this bone, with a corresponding “4” on the lower half. It is possible that these numbers were added by the curator prior to applying the adhesive putty and do not reflect tomb designation.<sup>29</sup> No such markings were found on the intact left innominate. Thus, while we could say with relative confidence that the two innominates in the T4 box came from the same individual, we were left asking “which individual?” yet again.

The cranial portions described by Vallois matched the extant remains. They contained several features useful to sex determination and appeared quite robust (male).<sup>30</sup> Based on the degree of tooth wear, auricular surface morphology, and cranial suture closure, we obtained a slightly younger age of thirty–thirty-five years.

### *Tomb 5*

De Vaux’s excavation notes indicated one burial in this tomb whose face was crushed by a fallen flagstone,<sup>31</sup> and there was one photograph in the archive to corroborate this.<sup>32</sup> Vallois, however,

indicated a possible double interment based upon superfluous bones.<sup>33</sup> He recorded the “bulky cranium” and very worn teeth of a young man (twenty–twenty-five year old), using portions of the skull and a robust mandible. In addition, he noted a gracile mandible, indicating a second person, probably female.

We also found two distinctively different mandibles in the “Tombe 5” box at the Musée de l’homme (fig. 9.4). One was quite robust and manifested every sign of being male.<sup>34</sup> The rest of the remains were likewise distinctively male, including the skull cap (based on the mastoid process, nuchal crest, browridge, and temporal line), portions of both innominates, and a sacrum.

Our age for the robust individual differed considerably from Vallois’s, however. Based on dental attrition, features of the innominates, and degree of cranial suture fusion, we placed this individual at forty–fifty years of age. Some arthritic lipping around the articulations of the pelvis was likewise indicative of an older individual. This person suffered from iron deficiency, had teeth with a rather severe calculus (hardened tartar) buildup, and a large auditory exostosis (growth in his ear opening).

Vallois’s observation of a second mandible, however, still holds true for the current collection. This second jaw was notably more gracile than the first; however, it did include some marginally masculine features.<sup>35</sup> Although the mandible alone is not the best indicator for a conclusive determination of sex, its presence does, indeed, hint at the possible commingling of two individuals of notably different robusticity. If nuclear DNA can be extracted from the teeth, future analyses may be able to determine sex conclusively.<sup>36</sup>

<sup>28</sup> Furthermore, this person suffered from a mild case of spina bifida occulta. This is the most common congenital spine abnormality, a benign form of the disorder that likely went unnoticed in the lifetime of this individual. It occurs in about 5–10% of the general population, so this also would have likely drawn Vallois’s attention to this bone were it present.

<sup>29</sup> For the tomb 3 bones with blue tomb designations, they often appear on intact bones which would preclude the notion that they were marked in order, prior to reconstruction.

<sup>30</sup> Robust mastoid processes, temporal lines, browridge, and nuchal crest.

<sup>31</sup> Humbert and Chambon 1994: 346–47.

<sup>32</sup> École biblique et archéologique française Catalogue: #11447, album LIX, p. 59 (see nn. 19, 40).

<sup>33</sup> Vallois’s description of tomb 5 states: “a) Crâne volu-

mineux et très nettement brachycéphale. Sexe masculin bien caractérise et âge relativement jeune: 20 à 25 ans. Mâchoire inférieure remarquable par la grande usure des dents, malgré l’âge peu avancé du sujet. Morceau de bassin masculin également. B) Une deuxième mâchoire inférieure, beaucoup plus grêle, paraît correspondre à un sujet féminine” (see Donceel 2002: fig. 2; see n. 20).

<sup>34</sup> With a marked mental eminence (partial), square chin, gonial eversion, and mandibular torus, indicative of a male.

<sup>35</sup> Some gonial eversion and a protruding chin.

<sup>36</sup> This is unlikely in the near future given their poor preservation. Even if DNA can be extracted from the dentin of these worn teeth, the odds that both mitochondrial *and* nuclear DNA could be extracted using current techniques is quite low.

*Tomb 6*

According to de Vaux's excavation notes, the remains in this tomb were very damaged.<sup>37</sup> The skull and mandible were crushed by several fallen stones as was the thorax. He reported that the pelvis was missing and postulated that it may have dissolved from the infiltration of water. Only the skull was removed for analysis.

Unfortunately, there were no photographs of this skeleton *in situ*, although pictures do exist of the grave prior to excavation<sup>38</sup> and upon reaching the cover stones.<sup>39</sup> It is possible that glass slides for these pictures exist in the École biblique archive, but were not printed for the large site archive albums.<sup>40</sup>

Vallois described the possibility that this tomb also represented a double burial.<sup>41</sup> He reported that most of the cranial fragments belonged to a forty year old man, but believed several pieces did not fit with the "very thick skullcap" and thus possibly signified a woman.

Our age range of thirty five–forty-five years was inclusive of Vallois's estimate, however, we could not corroborate his reconstruction of female remains. Although there was not much material to work with, the masculine features of this skull were quite pronounced, including a very square chin, protruding jaw, and thick brow ridge. Although the mastoid processes were not particularly long, they were quite robust. There was no evidence of a second, more gracile individual in the "Tombe 6" box at the time of our analysis.<sup>42</sup>

<sup>37</sup> Humbert and Chambon 1994: 347.

<sup>38</sup> École biblique et archéologique française Catalogue: #11453, album LXI, p. 61 (see nn. 19, 40).

<sup>39</sup> École biblique et archéologique française Catalogue: #11450, album LXI, p. 61 (see nn. 19, 40).

<sup>40</sup> Until 1953, de Vaux photographed aspects of the excavations at Qumran using glass plates. Many of these negatives were printed for inclusion in a large multi-volume set of albums of the site. Notes are included next to the pictures related to orientation, location, etc. We have published several photographs of the skeletons *in situ* in previous papers, and Humbert and Chambon 1994 included several as well.

<sup>41</sup> Vallois's description of tomb 6 states: "a) Une calotte crânienne très épaisse correspond à un crâne robuste avec apophyses mastoïdes volumineuses, mâchoire inférieure puissante. C'est certainement un homme d'à peu près 40 ans. La forme de la voûte indique la mésocéphalie; b) Un petit morceau crânien isolé porte une apophyse mastoïde beaucoup moins volumineuse que celle qui est attachée à la calotte précédente; il s'agit donc d'un autre sujet, très probablement féminine" (see Donceel 2002: fig. 2; see also, n. 20).

*Tomb 9*

Confusion arose in the classification of this tomb for several reasons. According to de Vaux's notes, Tomb 9 and Tomb A were synonymous. He described Tomb 9 as "Tombe A, cimetière nord," and reported removing only the skull and pelvis for this individual.<sup>43</sup> A photograph of the skeleton *in situ* exists, located in the archive album next to pictures of this "cimetière nord."<sup>44</sup> Vallois reported only very fragmentary remains in the Paris collection corresponding to "Tombe 9" as possibly representing a woman of indeterminate age.<sup>45</sup>

At the time of our visit to the Musée de l'homme in late summer 2000, there were no remains available for Tomb 9. But, in Jerusalem, remains for "Tomb A" exist. They are not fragmentary; indeed, this skeleton provides some of the only postcranial material available for the French collection. They are of a female approximately forty-five–fifty years old.

It seems improbable that Tomb 9 and Tomb A are one and the same. The striking difference in preservation, variation in the amount of material available, and the geographic separation (Paris vs. Jerusalem), indicate that we have two distinct graves. It is unfortunate that the remains for Tomb 9 are no longer available, especially given the controversial classification of this as a possible woman.

*Tomb 10*

The last tomb Vallois claimed "double occupancy" for was Tomb 10.<sup>46</sup> Like Tomb 9/A, de Vaux

<sup>42</sup> Of note, there was a large graphite "T6" on the calvarium for this individual. This was in addition to (and in agreement with) the India ink marking for "Tombe 6."

<sup>43</sup> Humbert and Chambon 1994: 347.

<sup>44</sup> École biblique et archéologique française Catalogue: #13, album LXVII, p. 67 (see nn. 19, 40). This picture appears next to photographs of "the northern cemetery" and is probably a shot of tomb A rather than tomb 9.

<sup>45</sup> Vallois's description of tomb 9 states: "Débris très fragmentaires; on a cependant l'impression qu'il doit s'agir d'une femme (?)" (see Donceel 2002: fig. 2; see n. 20).

<sup>46</sup> Vallois's description of tomb 10 states: "a) Crâne cérébral à peu près en bon état (le seul vraiment utilisable de toute la série). Sujet masculin de 40 ans à peu près avec un voûte brachycephalic (indice céphalique: 82.1), une face large, un menton bien accusé. Le type est celui des brachycephales arménoïdes; b) A côté de la manibule presque intacts du sujet précédent, une autre mâchoire inférieure très détériorée semble de type féminin, diagnostic que confirme l'existence d'un os iliaque de sexe féminin certain" (see Donceel 2002: fig. 2; see n. 20).

recorded Tomb 10 and Tomb B as indistinguishable.<sup>47</sup> For this grave, he reported the removal of a pelvis and skull. As was true for Tomb 6, pictures exist of the grave prior to excavation<sup>48</sup> and upon reaching the cover stones,<sup>49</sup> but not of the skeleton in the ground. Vallois described a well-preserved robust skull and mandible, belonging to a forty-year-old man. He also reported a second deteriorated mandible and innominate of a female.

Again, we could not fully corroborate his description. The cranium for Tomb 10 was, indeed, in better shape than any other in the Paris sequence.<sup>50</sup> This cranium demonstrated very robust, masculine features at every point of analysis. However, only one mandible was present. It was in poor condition, although the features preserved were quite male.<sup>51</sup> There were two innominates present, unfortunately, there were no preserved features of the left bone available for either age or sex determination. The right innominate was *very* poorly reconstructed, with the ischium affixed backwards! There was a comparable degree of arthritic lipping at the same location of the sacroiliac joints of both innominates, indicating that they may have been from the same person.<sup>52</sup> Sex was indeterminate for the right bone.<sup>53</sup>

Prior to reading Vallois's report, there was little reason to suspect a second burial because it is possible to have some degree of variable expression of secondary sexual characteristics in the skeleton of one person. However, with this new information, the possibility of two individuals increases.

Our age assessment matched Vallois's. Although the third molars (wisdom teeth) had not erupted, the level of wear on the remaining dentition indicated that the molars were either impacted or never present.<sup>54</sup> Auricular surface morphology, dental attrition, and cranial suture closure were used to determine an age between forty-five–fifty years old.

The designation of Tombs 10 and B as synonymous, again, does not fit the available data. The remains in Paris matched the excavation notes for Tomb 10. Remains for Tomb B were found in Jerusalem and represent a markedly different person—an older, toothless man, represented by little more than his edentulous mandible and neck (vertebra and ossified thyroid cartilage). For the reasons outlined for Tomb A, a joint designation of Tomb 10 and B is not warranted.

### Summary

It is interesting to note that the letter from Vallois to de Vaux dated November 11, 1952,<sup>55</sup> on file at the École biblique contained several notations in de Vaux's hand. Next to each tomb, he jotted the sex of the individuals. However, he crossed out Vallois's description of a second, possibly female mandible, from Tomb 5 and listed this tomb as "male." Likewise, there were hatch marks through the paragraph about a female burial in Tomb 6 with only "male" written next to the tomb. The notation for Tomb 10 was "male" with a question mark next to Vallois's comments about a possible second interment that was "de sexe féminine certain."

Sadly, Vallois never published a final report about his findings on the Qumran skeletons. He did not seem particularly interested in this collection, as indicated in a letter to the director of the École biblique in May 1952.<sup>56</sup> This is understandable given the small sample size, poor preservation, and the fact that interest in Qumran at the time paled by comparison to today. In addition, de Vaux apparently dissuaded Vallois from publishing, as seen in a letter dated November 25, 1952, because he believed Vallois' findings were in error.<sup>57</sup>

<sup>47</sup> Humbert and Chambon 1994: 347.

<sup>48</sup> École biblique et archéologique française Catalogue: #14, album LXVII, p. 67 (tomb 10—this picture is credited to Harding; see nn. 19, 40).

<sup>49</sup> École biblique et archéologique française Catalogue: #13811, album LXVII, p. 67 (see nn. 19, 40).

<sup>50</sup> Of note, there was a large blue pencil "T 10" on the well-preserved skull that agreed with the India ink markings of the same designation.

<sup>51</sup> Gonial eversion, square chin, mandibular torus.

<sup>52</sup> Very lipped margin of the inferior demiface on both innominates.

<sup>53</sup> The sciatic notch was wide, but the auricular surface was not elevated around its entire margin. The preauricular sulcus was, unfortunately, so encrusted with paraffin and dirt that removal with the instruments at hand risked damage to the bone.

<sup>54</sup> Unfortunately, we did not have access to an x-ray machine during our one week visit and were a bit limited for time given the operating hours of the Museum.

<sup>55</sup> See Donceel 2002: fig. 2; see n. 20.

<sup>56</sup> Donceel 2002: 36n 87.

<sup>57</sup> Donceel 2002: 39–40n 90 (see also n. 20).

*Possible Interpretations*

Based on the information outlined in the previous sections, we would like to present the following reconsideration of the remains in the French collection (Table 6). To date, comparable correspondence with Kurth has not surfaced to cause a re-evaluation of the Jerusalem segment of this collection. However, in light of Donceel's published accounts of the exchanges between Vallois and de Vaux surrounding the bones curated in Paris, our original reconstruction requires a bit of adjustment.

These adjustments include adding the possibility of a second individual to Tomb 5, now labeled "T5r" and "T5g" (for "robust" and "gracile"). These designations provide ease of identification, and distinguish our assessments from examples of clear double burials such as Tomb 16a & 16b. Also, a question mark has been added to the designation of "male" for Tomb 10, due to the indeterminate nature of the innominates in light of Vallois's concerns. At this time, we choose not to make changes to our designations for Tombs 4 or 6, because we could find no evidence to support Vallois' proposal of double inhumations. The remains for Tomb 9 have not, as yet, re-surfaced, so this reconstruction remains blank in our accounting. There were no adjustments to age designations, even though our assessments at times varied from Vallois's.

The incomplete nature of the available excavation records for Qumran makes it difficult to determine the true cause of the discrepancies outlined above. This is compounded by the fact that both written and photographic evidence for each tomb was deficient by today's archaeological standards. Furthermore, ambiguities about the nature of the material in Paris further complicates interpretation, especially in the absence of a professional report of Vallois's research. Based on the available information—our osteological analysis, de Vaux's photographic and written excavation records, and the recently published correspondence highlighted throughout this paper—we propose the following possible scenarios. It is important to remember, however, that we were not able to corroborate all of Vallois's claims, so some of this conjecture is based solely on his accounting:

*Post-Excavation Contamination*

At least two possibilities arise in this category: (a) the remains of a woman were inadvertently added to those of several tombs prior to their shipment to Paris. For example, perhaps they were mixed-up at graveside or while being cleaned/catalogued. The graves in question were all exhumed within a week of each other and, by de Vaux's own admission, they were not labeled as well as they should have been.<sup>58</sup> As all the questionable bones were classified as female by Vallois, perhaps the skeleton of one woman was accidentally distributed across several tombs.

(b) Alternatively, a mixing may have happened at the Musée de l'homme. All of the remains were presented to us in lidless boxes/trays. If this is how they have been stored over the long term, it is possible that new elements have been introduced.

*Intentional or Unintentional Biasing of the Finds*

A second possibility is that there were two individuals buried in the disputed tombs, but only one skeleton was excavated. Due to their lack of osteological training, the archaeologists may have occasionally included pieces from the second person while attempting to remove only one. Missing and obstructed-view photographs for some of these tombs, combined with de Vaux's dismissal of the "female" interpretations of Vallois, could lead the conspiracy-minded to this conclusion.

*Intrusive Elements Prior to Exhumation*

Finally, each of the extra elements may be intrusive. Perhaps they were introduced into the grave by a burrowing animal, such as a rock hyrax or desert mouse. Although quite possible in a large cemetery setting, it does beg two questions—why was there no evidence of rodent chewing on the remains, and where were the burrowing animals getting the remains of women?

Nature abhors a vacuum, and the void created by a lack of complete documentation is rather large. Many additional possibilities will likely be proffered by Qumran scholars in the years to

<sup>58</sup> All were exhumed in 1951: tomb 4 (Nov. 25); tomb 5 (Nov. 26), tomb 6 (Nov. 27 and 28), and tomb 10 (Dec. 1).

	TOMBS		AGE		SEX	
	<i>DeVaux's Sequence</i>	<i>Reeder Sequence</i> <sup>1</sup>	<i>Vallois &amp; Kurth Estimates</i> <sup>2</sup>	<i>New Estimates</i>	<i>Vallois &amp; Kurth Estimates</i> <sup>2</sup>	<i>New Estimates</i>
Paris Collection	T3	697	20–25	adult	M	M
	T4	661	40	30–35	M	M
			<i>adult</i>		F	
	T5[g]	526	adult	<b>adult</b>	F	<b>M?</b>
	T5[r]	526	40	40–50	M	M
	T6	37	adult	35–45	<i>F?</i>	M
	T7	749?	40–50	40–45	F <sup>5</sup>	M?
	T8	–	50+	40–45	M	M
	T9 <sup>6</sup>		<i>adult</i>	–	<i>F?</i>	–
	T10	1085?	40	<b>40–45</b> <sup>3</sup>	M	
			<i>adult</i>		<i>F</i>	<b>M?</b>
T11	959	50+	adult	M?	M	
Jerusalem Collection	T12	23	30	30–35	M	M
	T13	55	–	40–45	M	M
	T15	290	16	15–16	M	M
	T16a	360	30	30–40	M	M
	T16b	360	30–40	30–40	M	M
	T17	131	–	adult <sup>4</sup>	–	–
	T18	130	30	30–33	M	M
	T19	129	30–40	40–42	M	M
	TA	–	30–35	45–50	F	F
	TB	–	<50	60+	M	M

Table 6: Revised Demographic Profile for the French Qumran Collection

“M” = male; “F” = female; “x” = feature available for study; “–” = feature unavailable; “g” = gracile mandible; “r” = robust mandible

<sup>1</sup> H. Eshel, M. Broshi, R. Freund, and B. Schultz. “New Data on the Cemetery East of Khirbet Qumran,” *Dead Sea Discoveries* 9 (2002): 141.

<sup>2</sup> Donceel, *Synthèse des Observations Faites en Fouillant Les Tombes Des Nécropoles de Khirbet Qumran et des Environs* (Cracow, Poland: The Enigma Press, 2002); O. Röhrer-Ertl, F. Rohrhirsch, and D. Hahn, “Über die Gräberfelder von Khirbet Qumran, Insbesondere die Funde der Campagne 1956. I: Anthropologische Datenvorlage und Erstauswertung Aufgrund der Collectio Kurth,” *Revue de Qumran* 19 (1999): 3–46 (reprinted by B. Mayer (ed.), *Jericho Und Qumran: Neues Zum Umfeld Der Bibel* [Regensburg: Verlag Friedrich Pustet] 165–226.

<sup>3</sup> If there is a second individual in this tomb, age estimates for each would become more general—“30+”

<sup>4</sup> based on photograph evidence

<sup>5</sup> Vallois refers to this burial as “certinement feminins” although this tomb is usually published as “F?”

<sup>6</sup> Vallois also described remains for “Tombe 9” as and adult woman (?)

come and, hopefully, more information will come to light to help fill in the gaps. However, the absence of a taphonomic record for these exhumations—which would have included detailed notations about the state of the graves, possible intrusions, a stratigraphic sequence for each tomb, etc.—means that we may never know the correct answer. The “chain of custody” of the remains is long and serpentine, resulting in more questions and speculations than answers.

### Conclusions

At the time of our original analysis, the most parsimonious reconstructions for Tombs 5 and 10 were that duplication resulted from post-curation disturbance, as commingling apparently occurred with Tombs 3 and 8 after excavation.<sup>59</sup> However, Donceel’s reference to Vallois’s original claims about Tomb 5 provided reason for reconsideration.

<sup>59</sup> Based on the likely mixing of tombs 3 and 8, and the fact that the second mandible was not clearly labeled. Please see Sheridan et al. 2003: 138, fig. 4. At the time of this first

article on the French collection, we proposed that the extra tomb 5 mandible might be another misplaced portion of tomb 3. Given the Vallois note, this now seems unlikely.

The above sequence of events may simply reflect a series of coincidences. Nevertheless, they do raise cause for concern since we have: (a) the possibility of four tombs with double burials, where photographs of two of the *in situ* skeletons can not be found; (b) two mandibles of considerably different robusticity in the Tomb 5 box, with little previous mention of the potential for comingling in the literature about Qumran; (c) missing remains from Tomb 9, which were possibly female; (d) incomplete labeling of the remains by the excavators<sup>60</sup> prior to shipment; (e) and a letter indicating de Vaux's interpretations of Vallois's findings, which dismissed most of the information about possible female finds.

It is entirely possible that each concern has a logical explanation. Glass slides may, indeed, exist for Tombs 6 and 10 showing the skeletons upon excavation, that were simply never printed due to time and/or budgetary constraints. The second mandible in the box for Tomb 5 might be the result of mixing during curation, as we believe happened for Tomb 3. It has been almost fifty years since the Qumran bones were shipped to the Musée de l'homme, and it is, therefore, possible that the Tomb 9 remains have been lost in the intervening decades. Also, de Vaux may have had

ample reason to question Vallois's interpretations based upon his first-hand observations graveside. However, given the number of points outlined above, these issues warrant further investigation.

In summary, additional questions have been raised about the French collection. This casts a pall over a collection that was already lacking in many respects. About all that can be said with confidence, is that our analysis of the remains in Paris and Jerusalem indicate a preponderance of adult men. However, one cannot propose this age or sex profile as a community *pattern*. A questionable excavation plan, an exceptionally unrepresentative sample size, poor preservation, Vallois' claim of up to 6 possible women among the Paris remains,<sup>61</sup> and incomplete exhumation are but a few of the features complicating analysis of this collection beyond "reasonable doubt."

Our inability to contribute to a conversation about the function of Qumran using the skeletal remains is, indeed, a loss, as the scholarly community has waited over forty years for analysis of the bones. Nevertheless, any attempt to extrapolate these reconstructions to represent a larger community profile is a misuse of data from the French collection. This fact is made all the more poignant by the concerns raised in this paper.

<sup>60</sup> According to Donceel 200: 39–40n 90; de Vaux conceded this point in the last paragraph of a letter dated November 25, 1952 (see n. 20).

<sup>61</sup> Tombs 4, 5, 6, 9 and 10 as discussed, plus tomb 7.