

NEW RADIOCARBON DATES FOR THE LATER NEOLITHIC OF NORTHERN SYRIA

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ABSTRACT. – A series of fifteen radiocarbon dates has been obtained from the sites of Damishliyya and Sabi Abyad in the Balikh valley of northern Syria. These dates allow a more precise chronological assignment of later Neolithic cultural developments in the region, in particular of the introduction of the earliest pottery and the appearance of the Halaf culture.

RÉSUMÉ. – Quinze nouvelles datations C14 ont été obtenues sur les sites néolithiques récents de Damishliyya et Sabi Abyad, situés dans la haute vallée du Balikh (Syrie du nord). Ces déterminations aideront à établir une chronologie absolue plus précise pour le Néolithique récent, notamment concernant l'introduction des premières céramiques et l'apparition de la culture de Halaf en Syrie du nord.

Recently a number of radiocarbon dates were obtained for samples recovered from the excavations at the Neolithic sites of Damishliyya and Sabi Abyad, both located in the Balikh valley of north-central Syria. The age determinations were carried out at the Centre for Isotope Research of the University of Groningen (GrN nos.) or through Accelerator Mass Spectrometry (AMS) at the Physical Laboratory of the University of Utrecht (UtC nos.). The dates, fifteen in total, add in a significant way to our understanding of the absolute chronology of later Neolithic Syria and adjacent regions (1). Basically these dates serve to date local cultural developments at the sites of excavation and associated changes in overall settlement organisation and material culture. Especially at the site of Sabi Abyad the dates closely agree with the stratigraphic sequence and thus provide a reliable basis for reference in chronological terms. However, the newly retrieved radiocarbon results have a much wider impact, beyond the individual sites, since they allow a more precise dating of two major innovations in material culture, viz. (a) the introduction of the earliest ceramics in the region and (b) the appearance of carefully made *painted* pottery generally known as Halaf. The former innovation seems at first sight hardly to have touched the local Neolithic communities in a substantial manner: apart from the appearance of pottery, virtually no changes in settlement layout and community organisation or in material culture appear to have taken place (basically the earlier Pre-Pottery Neolithic B way of life is maintained) (2). The introduction of fine painted pottery, however, seems

to have been associated with major changes in Neolithic society. It coincided with the rise of the Halaf culture, which spread within a rather short time over a vast region and which, beside its handsome pottery, is characterised by circular buildings (*tholoi*) and a variety of typical beads, amulets and figurines. The introduction and further development of Halaf took place at a time of major changes in people-and-land relationships, the main ones being an increase in population, a continuous trend towards a dispersed settlement system of small villages and seasonal camp sites, and a twofold exploitation of the natural environment with, on the one hand, intensive agriculture and, on the other hand, extensive animal husbandry and hunting (3).

Originally, and on the basis of the results of the 1970 excavations at Tell Assouad in the upper Balikh region, the introduction of pottery in northern Syria was claimed to have taken place somewhere around the middle of the 7th millennium B.C. (4). The soundings at Assouad led to the distinction of eight levels of occupation, of which the basal levels VIII-VII were without architecture but with pottery, whereas the upper levels VI-I yielded mud-brick remains but no ceramics (5). A sample from the basal, pottery Neolithic level VIII suggested a date around 6500 B.C., whereas another one, from the upper, supposedly aceramic Neolithic level III, yielded a date around 6700 B.C. (6). However, in recent years the early dates presented by the Assouad samples have been repeatedly questioned (7), a doubt which seems

(1) In order to adjust the newly retrieved dates to the already existing chronological frameworks (and so to avoid general confusion) all dates will be used in a conventional manner, i.e. uncalibrated. See Table 1 for calibrated dates (when available).

(2) AKKERMANS, 1988, 1989b, 1990.

(3) *Ibid.*

(4) CAUVIN, 1974. But see CAUVIN, 1987 for a modified view.

(5) CAUVIN, 1972.

(6) CAUVIN, 1974 : 203 ; a third sample from level III indicated a date of around 10,000 B.C. and was rejected.

(7) LE MIERE, 1979 : 40 ; CAUVIN, 1987 : 333-34.

to be supported by evidence from other excavated Syrian sites, like Bouqras and Abu Hureyra. Here the earliest pottery seems to have appeared at the very end of the 7th or the beginning of the 6th millennium B.C. At Abu Hureyra small quantities of pottery were found in the topmost levels (phase III), marked by some mud-brick walls and numerous shallow pits filled with occupation debris. The latest radiocarbon date from the lower, aceramic levels is 6240 ± 77 B.C. and soon afterwards the first ceramics appeared at the site (8). The pottery from Abu Hureyra consists of a plain coarse ware which is straw-tempered and crumbly in texture. Most of the sherds seem to have been burnished to some degree and some sherds showed traces of red paint. In general, this pottery seems to be closely related to that from the Balikh sites. It has been claimed (9) that the pottery from Abu Hureyra, Tell Assouad and associated Balikh sites known only from surface reconnaissances is largely identical to the ceramics found at Bouqras in eastern Syria. However, Le Mièrè (10) has clearly shown that the Bouqras pottery belongs to a different tradition and more closely resembles the ceramics of sites like Umm Dabaghiyah, Tell Sotto and Yarim Tepe I in Iraq. Pottery at Bouqras appeared in mixed deposits in the "virgin-soil squares" from level 7 onwards but the larger part of it was found in the topmost southwestern part of the site. A number of radiocarbon dates from Bouqras suggest that the pottery found in the upper levels 7-1 of the "virgin-soil squares" can be dated around 6100-5900 B.C., whereas the ceramics from the southwestern area are of considerably later date, i.e. around 5600-5500 B.C. (11). Probably the pottery found at Bouqras for the larger part succeeds that recovered from Assouad, Abu Hureyra and other sites further west.

A rather late date, i.e. around 6100/6000-5700 B.C., for the earliest Pottery Neolithic of northern Syria is also indicated by some recently obtained radiocarbon dates from Damishliyya, a small Neolithic site on the west bank of the river Balikh. At least seven occupation layers were recognised during excavation, each characterised by small rectangular mud-brick buildings. The basal strata 1-2 can be termed Pre-Pottery Neolithic, whereas the upper levels 3-7 yielded small numbers of coarsely finished ceramics with little variety in shape (12). The present evidence suggests that Tell Assouad and Damishliyya were largely identical in material culture and there can be little doubt that both sites were simultaneously occupied. Three dates are available from Damishliyya, all coming from a large pit ascribed to the topmost strata 5-7. One sample was taken from charcoal, the others from burnt vegetable

inclusions in two sherds (13). The charcoal sample yielded a date of 5750 ± 90 B.C., closely supported by one of the sherd samples indicating 5720 ± 60 B.C. The other sherd sample, however, is considerably older, suggesting a date of 5970 ± 110 B.C. These age difference may be due to the nature of the context from which the samples were taken: some mixing of artefacts of various date can well be expected in the case of refuse pits. It may also be the case that the pit was in use for a considerable period of time, particularly if one takes into account its huge size and depth (the sherds came from different elevations). Whatever the case, it seems clear that the Damishliyya-Assouad pottery is, indeed, of much later date than suggested originally by the Assouad radiocarbon samples and that it is in much closer agreement with the available dates from the sites along the Euphrates. Originally, the pottery of Tell Assouad was compared by its excavator to that of Amuq phases A-B (14), but both Copeland and Le Mièrè have correctly stated that the Assouad and related Balikh pottery are not similar to the Amuq and Levantine Dark-Faced Burnished Ware; they suggest that the pottery from Tell Assouad, and therefore the comparable ceramics from Damishliyya, preceded the Amuq A assemblage (15). However, according to some radiocarbon dates from Ramad III and Labwe II-A, Amuq A pottery appeared in the early 6th millennium, i.e. around 6000-5900 B.C. (16), and when taking the Damishliyya dates into account this pottery may therefore very well be contemporary to our Balikh ceramics. So far only a few parallels have been found outside the Balikh area for the ceramic assemblages from either Tell Damishliyya or Tell Assouad. A strong regional variability in pottery development is indicated. In the Balikh region itself, intersite differences are noticeable, which are to be expected within a domestic mode of pottery production (17).

In the light of the Damishliyya dates, it appears that the sites of Damishliyya and Assouad were deserted around 5700 B.C. At that time, numerous other settlements in the Balikh valley were also abandoned and a flourishing Pottery Neolithic society seems to have come to an end (18). It is tempting to relate this collapse of local Neolithic society to the general trend towards community desertion in the early 6th millennium B.C. (the so-called *hiatus palestinien*), but I strongly feel that a similar gap in occupation was in fact non-existent

(13) The age determination was done through Accelerator Mass Spectrometry (AMS) at the Physical Laboratory of the University of Utrecht. Of each sherd, three samples were taken for analysis; the data presented here are an average.

(14) CAUVIN, 1972. Later Cauvin rejected this view and agreed with the comments brought forward by LE MIERÈ, 1979; cf. CAUVIN, 1987.

(15) COPELAND, 1979: 266; LE MIERÈ, 1979: 38.

(16) MOORE, 1982.

(17) AKKERMANS, 1990.

(18) AKKERMANS, 1989b, 1990.

(8) MOORE, 1982: 15.

(9) CAUVIN, 1974; MOORE, 1975, 1982; COPELAND, 1979.

(10) LE MIERÈ, 1983, 1986.

(11) LE MIERÈ, 1986: 120-21, 253-57.

(12) AKKERMANS, 1986/87, 1988.

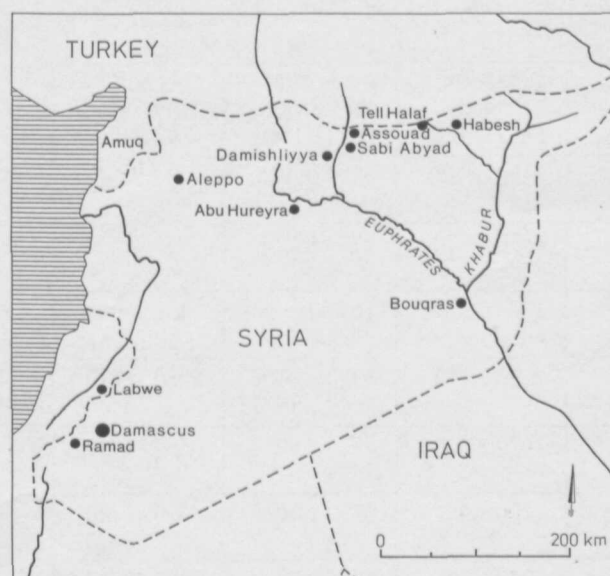


FIG. 1. – Location of the three Neolithic Balikh sites with radiocarbon dates, and other Syrian sites mentioned in the text.

in northern Syria. Part of the assumed trend towards site abandonment in vast areas of Syria and the Levant at this time (19) is without doubt in agreement with the present state of research, although, for that matter, we do have evidence that numerous settlements were given up in the Balikh valley as well, the reasons for which are still unclear. On the other hand, although many sites were abandoned, the present evidence suggests that the valley as a whole was not left uninhabited; occupation in the region seems to have contracted to several larger sites. At present, only a few sites indicate a continuous occupation throughout the 6th millennium B.C., one of which is Sabi Abyad.

Sabi Abyad is located about three kilometres northeast of Damishliyya. The site covers an area of about four hectares and has yielded evidence of permanent occupation for a considerable period of time (20). Three major phases of occupation have been recognised, viz. a pre-Halaf Neolithic phase (Levels 8-7), followed by a transitional stage (Levels 6-4) and a topmost Early Halaf period (Levels 3-1).

At present, twelve radiocarbon dates are available from Sabi Abyad (Table 1). Four samples stem from the northeastern mound (UtC-1010, UtC-1011, UtC-1012, GrN-16806), whereas the remainder comes from the southeastern area of excavation. With two exceptions (sample GrN-16801, which is definitely too old, and sample UtC-1010, which seems to be too young), the samples are in agreement with the stratigraphic sequence and as such seem to be highly reliable.

(19) See, for example, MELLAART, 1975 : 67-69; MOORE, 1983 : 99.

(20) For a general introduction to the site, see e.g. AKKERMANS, 1987, 1989b, 1990.

The earliest phases of occupation so far uncovered at Sabi Abyad seem to date from around 5300 B.C., but since virgin soil has not yet been reached, it is expected that earlier levels will be found. Some sherds closely resembling the Assouad-Damishliyya pottery of the early 6th millennium were found on the surface of the site and, in disturbed contexts, in the trenches of excavation. These ceramics strongly plead for a continuous occupation at Sabi Abyad throughout the 6th millennium B.C. The lowest levels thus far reached in excavation must have been contemporary to phase B of the Amuq in western Syria. The best comparisons are found in the characteristic Amuq Dark-Faced Burnished Ware, which occurred in small quantities at Sabi Abyad and which was found on the surface of some other sites in the Balikh region (21). The Dark-Faced Burnished Ware vessels differ from the other burnished pottery in shape, temper, colour and decorative pattern, and clay analyses have made it clear that these vessels are import products from western Syria or southeastern Turkey (22). In the Syrian Jezirah the closest parallel to the earliest ceramics of Sabi Abyad is probably supplied by the *Altmonochrome* wares of Tell Halaf and Tell Habesh (23).

The remaining figures from Sabi Abyad date either from the "transitional" period from the *Altmonochrome*-like Neolithic into the Halaf period, dated around 5200/5150-5100 B.C., or from the topmost Early Halaf period which can now be firmly placed between about 5100-5000 B.C. Conventionally, Halaf is said to begin around the middle of the 6th millennium B.C. but this view can no longer be maintained. The present data suggest that the often-mentioned figure of 7570 ± 35 BP (5620 B.C.) from Tell Halaf (24), said to date the transition from *Altmonochrome* to Halaf, is much too old and can safely be rejected (25). Interestingly enough, the "transitional" period is characterised by, among other things, the appearance of carefully made and busily painted (sometimes painted-and-incised) ceramics, some of which closely resemble Samarran pottery from north-central Iraq (26). Apparently this Samarra-like pottery preceded the appearance of true Halaf ceramics at the site. Samarran or Samarra-derived pottery is still found in the Early Halaf period, when characteristic Samarra traits occasionally appear in combination with Halaf features even on the same vessel (27). A number of radiocarbon dates from Tell as-Sawwan and related sites suggest a date in the later 6th millennium, i.e. about 5300-5000 B.C., for the Classical Sa-

(21) AKKERMANS, 1990.

(22) LE MIERE, 1989.

(23) Cf. VON OPPENHEIM and SCHMIDT, 1943; DAVIDSON, 1977.

(24) VOGEL and WATERBOLK, 1964.

(25) Earlier, WATKINS and CAMPBELL, 1987 : 444, among others, had already expressed strong doubts regarding the correctness of the Tell Halaf sample.

(26) AKKERMANS, 1989a, 1990.

(27) *ibid.*, fig. IV : 22, nos. 152, 158.

TABLE 1
Radiocarbon dates from later Neolithic sites in the Balikh valley, Syria (note : dates of Assouad after Cauvin 1974).

SITE	LAB. NO.	MATERIAL	LEVEL/ STRATUM	CONVEN- TIONAL DATE B.P.	CONVEN- TIONAL DATE B.C.	CALIBRA- TED DATE B.C.
Assouad	Mc-864		VIII, 1	8450 \pm 120	6500 \pm 120	
	Mc-865		III, 1	8650 \pm 120	6700 \pm 120	
	Mc-607		VI	12,500 \pm 160	10,550 \pm 160	
Damishliyya	UtC-1094/ 1095/1096	chaff in sherd	5-7	7920 \pm 110	5970 \pm 110	7050 - 6610
	UtC-1097/ 1098/1099	chaff in sherd	5-7	7670 \pm 60	5720 \pm 60	6560 - 6440
	UtC-1124	charcoal	5-7	7700 \pm 90	5750 \pm 90	6610 - 6440
Sabi Abyad	GrN-16804	burnt grain	1	6975 \pm 30	5025 \pm 30	5951 - 5768
	GrN-16800	charcoal	2	7005 \pm 30	5055 \pm 30	5959 - 5818
	GrN-16801	burnt seeds	3	7465 \pm 35	5515 \pm 35	6390 - 6189
	GrN-16802	burnt seeds	3	7065 \pm 30	5115 \pm 30	5977 - 5818
	GrN-16803	burnt seeds	4	7075 \pm 25	5125 \pm 25	5979 - 5889
	UtC-1008	charcoal	4	6930 \pm 80	4980 \pm 80	5954 - 5664
	UtC-1009	burnt seeds	8	7080 \pm 80	5130 \pm 80	6074 - 5883
	GrN-16805	burnt wood	8	7145 \pm 30	5195 \pm 30	6077 - 5976
	UtC-1010	burnt wood	(Halaf n.e. mound)	6670 \pm 100	4720 \pm 100	5640 - 5480
	UtC-1011	burnt wood	(pre-Halaf n.e. mound)	7150 \pm 90	5200 \pm 90	6090 - 5960
	UtC-1012	charcoal	(pre-Halaf n.e. mound)	7170 \pm 90	5220 \pm 90	6100 - 5970
	GrN-16806	charcoal	(pre-Halaf n.e. mound)	7225 \pm 30	5275 \pm 30	6097 - 6003

marra (28). When comparing these figures with both the radiocarbon dates and the ceramic sequence of Sabi Abyad, it not only becomes clear that the rise of Samarra in Iraq must have preceded that of Halaf in Syria but also that both cultural complexes must have been in existence contemporaneously for at least some time.

Interestingly enough, whereas at present no direct relationship between a pre-Halaf stage and the Halaf period can be established for northern Me-

sopotamia (29), such a link now does exist for the Syrian Jezirah. Tell Sabi Abyad has given solid proof of a gradual and uninterrupted, local development of Halaf out of an earlier Neolithic culture, and in this

(28) Tell as-Sawwan levels IIIA to V; see, e.g., MELLAART, 1975 : 154; COPELAND and HOURS, 1987 : 407.

(29) So far, any links between Halaf and Hassuna appear to have been based on incorrect chronological assignments. Actually, at all the excavated sites yielding both Hassuna and Halaf levels of occupation, like Tell Hassuna, Hajjiluk, Tell Azzo, Nineveh, Yarim Tepe I and Kharabeh Shattani, it appeared that the Halaf strata belonged to the later stages of the Halaf period, which clearly indicated a hiatus in occupation. Cf. COPELAND and HOURS, 1987 : 407; WATKINS and CAMPBELL, 1987 : 433 ff.

respect seems to confirm the (admittedly poorly founded) sequences provided earlier by Tell Halaf and Tell Habesh near the Syro-Turkish border. At the latter sites, the basal levels yielded so-called *Altmonochrome* pottery exclusively, at a later stage followed by a mixture of both *Altmonochrome* and painted Halaf pottery until in the upper levels the *Altmonochrome* finally disappeared (30). In this respect, and when taking into account that Halaf in Mesopotamia does not seem to appear before about 5000 B.C. (31), it seems clear that the Syrian Jezirah definitely forms part of the Halaf heartland, perhaps even constitutes the region of origin (32).

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(30) VON OPPENHEIM und SCHMIDT, 1943 : 25; DAVIDSON, 1977.

(31) As evidenced, for example, by a recently obtained date of 6930 ± 60 BP at Arpachiyah; HIJARA et al., 1980 : 144. For a detailed account on (later) Halaf radiocarbon chronology, see e.g. WATKINS and CAMPBELL, 1987; COPELAND and HOURS, 1987. A long list of Halaf radiocarbon dates is presented by AURENCHE and EVIN, 1987.

(32) See AKKERMANS, 1990 : 293-98 for a more detailed account on this matter. However, Early Halaf painted ceramics closely resembling those of Sabi Abyad have also been found recently in northern Iraq (S. CAMPBELL, Edinburgh, pers. comm.).

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