Overview

Archaeological research on the DGB-1 and DGB-2 sites, Mayo-Tsanaga Division, Far North Province, Cameroon, took place between 15 December 2010 and 31 January 2011. This research was undertaken under Cameroonian Ministry of Scientific Research and Innovation Research Permit # 004 (2011), in collaboration with Université de Yaoundé I and the Department of Cultural Heritage, Ministry of Culture, and was funded by National Science Foundation (United States) Research Grant # 0743058. This field season was the second undertaken under this research grant. The research team was made up of Scott MacEachern (Bowdoin College), Jean-Marie Datouang Djoussou (Université Laval) and Rébecca Janson (Université de Montréal), along with two Cameroonian students Samson Mengolo Mbel and Bissai Sokona (Université de Yaoundé I) and one American student, Zoë Lescaze (Bowdoin College). In addition, approximately 20 men and women from Kuva and the nearby village of Gousda worked on the excavation site with us. Finally, representatives of the Zamani (African Cultural Heritage and Landscapes Database) Project conducted a large-scale programme of laser scanning of the architecture of the DGB-1 and DGB-2 sites, along with related mapping activities.

The primary focus of the 2010-2011 research was the DGB-1 (Kuva-1) and DGB-2 (Kuva-2) sites and the areas around them. These are respectively the largest and the second largest of the so-called DGB sites, complexes of dry-stone terraces and platforms on the slopes of the northwestern extension of the Mandara Mountains (Figure 1) (DGB stands for ‘diy-geδ-bay’, or ‘the place/ruin of chiefly residence’ in the Mafa language.) DGB-1 and DGB-2 are situated only approximately 100m apart. Radiocarbon dates obtained from the DGB-1 site in 2008 indicate that the two sites were in fact in use contemporaneously for some time (MacEachern et al. 2010), and thus can potentially be thought of as a single site complex for at least part of the period of occupation. One of the objectives of the 2010-2011 field season was to evaluate the evidence for prehistoric human activities between the DGB-1 and DGB-2 sites, and more generally in the area around the DGB-1/-2 site complex, in order to gain insights on the nature of relations between DGB-1 and DGB-2.

In addition to archaeological survey and excavation around the DGB-1/DGB-2 site complex, survey work was undertaken in an area north-west of that site complex, along an approximately 24km transect paralleling the international border between Cameroon and Nigeria. This survey was undertaken to increase our understanding of the relations between the DGB sites and the precolonial capital of the Wandala state at Keroua, which appears to have been occupied at the same time as
the DGB sites. Numerous archaeological sites were discovered in the course of that survey, and those sites will be a focus of project research in the area.

**Organisation of the Research**

Research work during the 2010-2011 field season entailed: (1) excavations on a number of different locations around the major DGB-1 and DGB-2 site complexes, undertaken to evaluate occupation sequences and use of the areas around the main site; (2) excavation between the main DGB-1 site and the adjoining Northern Outlier, a natural outcrop displaying DGB-type walling to the north-west of the main site, undertaken to evaluate evidence for a ‘pre-DGB’ occupation found when a test pit was excavated in the area in 2008; (3) test-pit excavations undertaken at a number of locations away from the main DGB-1/DGB-2 occupation area, undertaken in order to examine the sequence of terrace construction in the areas around the site; (4) archaeological survey northwest of the DGB-1/DGB-2 site complex, following the Cameroon-Nigeria border and undertaken in order to evaluate the frequency of archaeological sites in the area and to locate promising sites for further excavation; and (5) a programme of high-resolution laser scanning, GPS mapping and photography of the architecture.
Figure 2: DGB-1 and -2 laser scan, with 2008 and 2010-2011 excavation units.
of the DGB-1 and DGB-2 sites by representatives of the Zamani (African Cultural Heritage and Landscapes Database) Project, undertaken to provide a detailed three-dimensional model of the site for purposes of architectural interpretation and conservation.

Excavation proceeded in 1m$^2$ grids in all area except in the test-pits, by natural levels when these were detectable and by arbitrary 10cm levels otherwise. All excavated material was sifted using 5mm mesh screens. Ceramics from the excavations were catalogued and analysed during fieldwork, and were afterward stored in the village of Gousda, while other materials were catalogued and brought to the United States for further analysis. Compensation was paid to local farmers for all field disturbances associated with our excavations, and landowners were preferentially hired for the excavation process.

**Results of the Research**

Preliminary discussion of research results will be organised according to (1) excavation unit for the different phases of excavation undertaken during the 2010-2011 field season (the procedure also followed in the Preliminary Field Report for the 2008 field season), followed by (2) discussion of archaeological survey and Zamani Project mapping results. This in turn will be followed by a broader discussion of the historical implications of our findings in general. Excavation proceeded according to numbered units, in a sequence following from the 2008 field season. During the 2010-2011 season, Units 25-31 were excavated, as were 10 test pits, and the results of these excavations will be examined in sequence (Figure 2).

**Units 25 and 29.** Unit 25 was a 5x1.5m trench established on the southwest side of DGB-2, 53 metres from the South Platform of that site and just behind and above the massive DGB retaining wall that anchors that part of the site. Unit 29 was an extension of Unit 25 to the north and east, of 1.5m in each direction. The two units were excavated in order to study the construction history of that part of the retaining wall and the terrace above it, since in a similar position at Unit R on the western side of DGB-1 excavations in 2008 had revealed a complex architectural sequence, with multiple wall-building episodes. The architectural history on Unit 25/29 proved not to be as complex as in Unit R, involving (as far as can be seen) only one individual phase of wall construction, and no conclusive evidence for any domestic occupation on the terrace.

Construction of this terrace behind the southwest massive retaining wall appears to have involved the sequential construction of courses of the massive DGB wall along with, first, a fill behind the wall of large (0.25-0.4m greatest dimension) stones which probably extended to a depth of at least 2.5 - 3m (depending upon the topography of the slope underlying the terrace). This was overlain by an approximately 5-10cm layer of smaller stones packed in among the larger, presumably to provide some stabilisation for the larger rocks, with a 10-30cm layer of earth on top, providing the modern ground surface of the terrace. A double-layered stone retaining wall was built along the terrace, at some unknown time after its initial construction but probably still during the period of DGB occupation; it sits on top of the final earth layer from the terrace construction, and may again serve to stabilise the earth on top of the terrace. A line of stones found during excavation in Unit 29 was probably a similar retaining wall, now buried in the accumulated earth of the terrace. Relatively little cultural material was found in the course of excavations of these units, consistent with the lack of evidence for domestic or ritual use of the terrace. Almost all of the cultural material recovered consisted of relatively small potsherds found in the soil in the uppermost levels of the units. Identification of the cultural affinities of that pottery is difficult, given its condition, but it is not inconsistent with the broader range of DGB cultural material.

**Units 26, 26a and 28.** Unit 26 was a 2x2m unit established in the terraced area between DGB-1 and DGB-2 (see map), 21m from the base of the
slope of the former and approximately 30m from the bottom of the main West Terrace wall of the latter. Unit 26a was a 1x1m extension on the SW quadrant of this unit, excavated to verify the existence of a hearth in this part of the unit just above bedrock. The aim of excavation of Unit 26/26a was evaluation of the nature of human occupancy of the area between DGB-1 and DGB-2, given that radiocarbon dates have established that they were occupied simultaneously (MacEachern et al. 2010). Unit 26/26a was excavated to bedrock at a depth of 55-75cm, sloping downward from the west side of the unit to the east.

The soil from ground surface to about 35cm below the surface was extensively disturbed by agricultural activities, with only relatively small numbers of small potsherds recovered. A less-disturbed cultural level was encountered at approximately 35-55cm below the ground surface. This quite compact loam contained substantial amounts of ceramics, as well as charcoal, isolated iron pieces and bone fragments, and slag. The morphological and decorative characteristics of the ceramics place them within the general corpus of DGB pottery, and a date from Unit 26 Level 5 places this cultural horizon in the early-/mid-15th century AD – that is, during the main occupation phase for DGB-1/2. No significant evidence of architecture was found in Unit 26/26a, but a probable hearth, consisting of a stone arrangement with pieces of charcoal scattered among the stones, was found in the SW quadrant of Unit 26 at a depth of 45-50cm; Unit 26a was excavated in order to expose more of this feature. Both slag and iron were found in the feature and, given lower densities of slag and iron in Unit 26 as well, it is possible that the general area was used for smithing activities. Units 26 and 26a thus show evidence for occupation of the now-terraced area between DGB-1 and DGB-2 during the period of use of those sites. The compact nature of the cultural level, and the cultural materials associated with it, may indicate that this was an open area, outside of any structures on that part of the site.

Unit 28 was excavated for similar reasons to Units 26 and 26a, but closer to DGB-2, on a small agricultural terrace approximately 13m from the bottom of the main West Terrace wall. Matrix was a very compact brown loam throughout, generally similar to that in Units 26/26a. Ceramics was found at relatively low frequencies through the excavated levels, and bedrock was encountered at 30-40cm below the surface. The position of Unit 28 was on the side of the small elevation surmounted by DGB-2, and it is not surprising that there is less soil deposition at that location than in the basin between the DGB-1 and DGB-2 hillocks. This area seems to have seen human activity, with the compaction of the soil probably in large part due to the movement of people and domestic animals on the site, but there is no evidence of structures in this area. Both the ceramics and a radiocarbon date from the early-/mid-15th century AD, from approximately 30cm below the surface, again place this cultural level in the DGB period.

Unit 27. During the 2008 field season, a small (2x1m) excavation unit, Unit 21, was initiated to appraise cultural activities off the main area of the DGB-1 site – in this case, to the northwest of the site, on an agricultural terrace in the small gully between the West Terrace and the Northern Outlier. This unit yielded what appeared to be a rock fill behind a low wall to about 55cm below the surface; below this fill, excavators uncovered a brown sandy loam, with relatively high levels of ceramics (but no bone or charcoal), which continued until bedrock was encountered at approximately 1.1m BD. Most significant was that the decoration on the recovered ceramics was somewhat different from both recent Mafa and earlier DGB ceramics. Pottery from the bottom of Unit 21 was not rouletted; rather, the decoration was dominated by cross-hatching and incision, especially on the upper body near everted rims on small neckless jars. Unfortunately, Unit 21 was initiated late in the field season, and could not be extended at that time.

Unit 27, a 2x2m excavation, was initiated 7m northeast of Unit 21, with the goal of obtaining more information about the phenomena en-
countered in Unit 21 in 2008. In general, the stratigraphic sequence paralleled that in Unit 21. The top 30 cm yielded a sandy loam with small amounts of pottery, some of it diagnostic of a DGB occupation but almost certainly disturbed through time by hoe agriculture. Below that, between 30-70 cm BD, excavators encountered a fill of large rocks, stabilised and locked into place by smaller rocks placed between them; this is carefully put together and would appear to be the fill for a significant platform, probably the same as was encountered at the same depths in Unit 21 in 2008. It was noted by one of our Mafa informants that previously there had been a stone staircase, of a form characteristic of the DGB sites, on the N1 Buttress feature on DGB-1 about 5 m from Unit 27; this platform fill might be associated with that feature.

Large DGB potsherds were found just above, within and just below the rock matrix, while a stone axe was found just among the rocks at the bottom of this rock level, in the southwest corner of this unit. This stone axe appears on inspection to be made of greenstone, a fine-grained dolerite that in this region is associated primarily with quarries around Maroua, about 65 km southeast of DGB-1, where bifacial blanks for such axes and other stone tools are common. Two other greenstone flakes, one of them probably detached from an axe bit during use, were also discovered in the unit. The existence of these lithic artefacts presents something of a conundrum, as stone axes are in this area (and through Africa more generally) primarily associated with Neolithic occupations. Ancient stone axes certainly play a talismanic role in modern Mandara communities (van Beek 2012: 25), and there is no reason that a Neolithic axe could not be reused in such a role during the DGB period as well; however, the presence of greenstone flakes, as well as the axe, tends to militate against that conclusion. It seems equally unlikely, however, that the axe was still being used for utilitarian purposes in the mid-second millennium AD.

Below this level of stone platform fill, an extremely compact sandy loam with increasing amounts of carbonate continued from 70 cm BD until bedrock was encountered through the entire unit and excavations ceased at 1.9 m BD, although the levels between 150 and 190 cm BD were in a small pocket in the bedrock and yielded no artefacts. Ceramics were encountered in the soil matrix between 70 cm and 150 cm BD, although not at the frequencies found in a similar context in Unit 21. This pottery is, like the ceramics from similar levels in Unit 21, decorated primarily with burnishing, incision and cross-hatching; virtually none is rouletted, in striking contrast to the DGB pottery (David 2008). No other cultural material was found in these levels. A charcoal sample from the rock layer itself yielded a radiocarbon date in the early-/mid-15th century AD, consistent with the presence of DGB ceramics among the rocks. A second sample from approximately 100 cm BD, and thus associated with the ‘non-DGB’ ceramics, produced a date of the late-13th/early-14th century AD. This might indicate that the ‘non-DGB’ pottery dates from an earlier occupation of the site; however, excavations in Unit 6 in 2008 yielded an almost exactly comparable date, with DGB ceramics (MacEachern et al. 2010). We must thus note the possibility that different areas of the site were being occupied at the same time early in the occupation sequence for DGB-1, by two groups of people making different kinds of pottery; the other possibility is of course that at least one of these dates is erroneous. Lower levels in Unit 27 with the same ‘non-DGB’ pottery did not yield charcoal for dating, and we do not at this point know when that pottery was first produced at the site.

Unit 30. Like Units 26, 26a and 28, Unit 30 is a 2x2 m unit placed on the terraces between DGB-1 and DGB-2, in this case only about 10 m from the bottom of the slope on the east side of DGB-1. Its purpose was, again, to evaluate the evidence for use of this area between the DGB-1 and DGB-2 architectural complex during the period of occupation. It was excavated to bedrock at a maximal depth of 120 cm, with cultural material, especially pottery, encountered at all levels. The unit is notable for two reasons. First, the soil profile was significantly dif-
ferent from that in Units 26/26a, even though the two units are on terraces in the same general area (that is, in the relatively flat terraced area between DGB-1 and DGB-2) and only 16m apart. The uppermost soil horizon (0-40cm below datum) was a very compact, dark brown clay loam, which appeared to have a higher organic content than earlier units. Below that (approximately 40-75cm below datum) was a very compact brown-orange clay loam, while the bottommost horizon (approximately 75-120cm BD) was a very hard sandy loam with high carbonate content, very similar to the bottommost horizon (70-190cm BD) in Unit 27 (see above). This illustrates the varying depositional histories, likely tied to differences in use that one might expect to find across the site. Also notable was the appearance of DGB ceramics in the uppermost levels, along with some iron artefacts, but relatively thin potsherds decorated primarily with incision and cross-hatching in the deepest horizon. We thus see pottery similar to the ‘pre-DGB’ pottery encountered in Units 21 and 27 found in Unit 30, in a similar soil matrix. A radiocarbon date on charcoal from approximately 40cm BD (that is, from the levels that yielded DGB pottery) yielded a wide date range of AD 1450-1630, consistent with the latter part of the period of DGB occupation, while a date from approximately 92cm BD, from levels yielding ‘pre-DGB’ pottery, of the early-/mid-15th century AD – that is, within the main period of DGB occupation.

Unit 31 and West Staircase. In the course of brush clearance associated with the scanning programme (see below), a filled-in stone staircase was detected on the WC2 Terrace on the west side of DGB-1. This was the first external filled-in staircase found on DGB-1, and so it was decided to open the staircase up in order to gain information on modes of construction and potentially radiocarbon samples, after which it would be refilled. This allowed extensive documentation of the refilling of the West Staircase. At the same time, Unit 21, a 2x1m excavation, was placed on the WC2 Terrace just above the top of the West Staircase, to see whether there might be any architectural connection between that feature and the approach to either the NC Platform (the most-elevated part of the site) or the Central Courtyard Area, excavated in 2008. Unit 31 was excavated to bedrock at 50-80cm below datum, without the discovery of any architectural features. The soil matrix was a fairly undifferentiated and very compact sandy loam, with abundant quartzite inclusions and a moderate density of DGB potsherds. A charcoal sample taken from the infill material in the West Staircase provided a radiocarbon date of AD 1470-1650, which is generally consistent with the latter part of the period of DGB occupation.

Test pits. A total of 10 of 1x1m test pits (Sondage 1-10) were excavated at locations on the periphery of the DGB-1/-2 site complex, with the objectives of (1) quickly evaluating the intensity and characteristics of human activity away from the architectural complex itself (DGB-1 and -2, and the area between them), (2) evaluating the depths and nature of soil development in those areas and (3) obtaining material for radiocarbon dating, pursuant to a longer-term study of the history of terracing around the site complex. These were placed in pairs, so that Cameroonian archaeology students working in tandem could oversee excavation. These will not be described individually, but the following general conclusions can be made: (1) there is evidence for human activity in all areas sampled around the site; (2) such activity is considerably more evident closer in to the site itself (for example, on the east slope of the DGB-2 complex [Sondages 7 and 8] and just northeast of DGB-1 [Sondages 1 and 2)] than further away from the site (for example, Sondages 9 and 10, 70m east of DGB-2); (3) soil accumulation is significantly greater in the sondages excavated close to the DGB-1/-2 site complex than in those on agricultural terraces more distant from the site complex; and (4) two charcoal samples from Sondage 8 yielded highly imprecise and stratigraphically-inverted radiocarbon dates, suggesting that disturbance in these relatively shallow stratigraphies may make dating of the terrace system in this area difficult.
Archaeological Survey

Preliminary archaeological survey was undertaken northwest of the DGB-1/DGB-2 site complex, starting at the village of Itéré, about 5km northwest of DGB-1/-2. The survey followed the Cameroon-Nigeria border, and was defined by the villages Sheteuk/Keroua-Mafa/Vrétéké/Djibrilé/Ashigashiya/Keroua, over a distance of approximately 25km; it succeeded a short survey undertaken in 2010 by Datouang Djoussou and Mengolo Mbel. The survey was undertaken in order to evaluate the frequency of archaeological sites in the area and to locate promising sites for further analysis, in light of possible relations in the mid-second millennium AD between the inhabitants of the DGB sites and the contemporary inhabitants of the capital of the Wandala state at Keroua, located at the foot of Keroua inselberg on the modern Nigeria-Cameroon border. This survey resulted in the location of abundant cultural materials in numerous locations along the survey transect, and the identification of at least nine sites that show promise for further investigation. This work was continued by Janson (2012), as part of her doctoral research in January-March 2012.

Scanning Programme

A programme of high-resolution laser scanning, GPS mapping and photography of the architecture of the DGB-1 and DGB-2 sites was undertaken by a team from the Zamani (African Cultural Heritage and Landscapes Database) Project, in order to provide a detailed three-dimensional model of the site for purposes of architectural interpretation and conservation. The laser-scanning programme was associated with clearance of grass and brush from the two sites, in order to increase visibility of site features for the scanners. This brush clearance made it significantly easier for the research team, not merely the laser scanners, to see features in different parts of the site, and directly resulted in the discovery of the filled-in West Staircase (see above), and potentially one other staircase as well. This scanning programme has provided us with an extremely detailed three-dimensional model of the DGB-1/-2 site complex and the terrace systems that lie around and on the sites (Figure 2), which will be of significant aid in helping us study the relations between different parts of this complicated site. We also hope to be able to use this model to evaluate the stability of the DGB walling in different parts of the DGB site complex, since the dry-stone construction of these walls makes them very vulnerable to collapse.

Discussion

The 2010-2011 field season at DGB-1/-2 provides a significant contrast to the 2008 season, which was directed toward investigation of the characteristics of the DGB-1 site itself. That 2008 fieldwork was very productive in helping us to understand the chronology and characteristics of occupation on DGB-1, and involved excavation in quite striking areas of the site – especially the Central Courtyard Area and Unit R. The 2010-2011 season involved investigations of areas perhaps less immediately striking, but essential to any comprehensive understanding of how the entire DGB-1/-2 site complex was used. It provided us with insights on a number of salient questions, while raising others. Perhaps most important, our investigations in 2010-2011 provided information on the nature of occupation of the terraced area between DGB-1 and DGB-2. It is evident that this area was a focus of human activity during the primary period of occupation, especially during the 15th century AD: most units excavated and dated yielded material dating from that period, and the artefact densities and compact nature of the relevant deposits demonstrate substantial occupation during that period (Figure 3). At the same time, our excavations did not locate substantial architectural features in the area between DGB-1 and -2, as existed for example on the west side of DGB-1 (in Unit R) during the same period. It is possible that limited excavations (12m² in an area of approximately 0.6ha) simply did not locate existing architecture; alternatively, it may be that substantial domestic structures were restricted to the heights of the site and/or to areas somewhat removed from
Figure 3: Radiocarbon dates from the DGB sites.
the DGB-1/-2 site complex, as is the case today. It should be noted that geophysical methods of investigation (GPS, magnetometry) would probably not be very useful in this area, given the proximity and complexity of the bedrock topography. Results from the excavations and the sondages strongly indicate that any understanding of the origins of human landscape management in this area will require substantial geomorphological analysis on terraces to locate intact, stratified deposits that, combined with artefactual data, would allow us to build up a preliminary chronology of land use.

One of the most puzzling questions from the 2008 and 2010-2011 field seasons involves the succession of ceramic assemblages on the site complex. We have discovered ceramics with morphological (thin-walled sherds) and especially decorative characteristics (incision, cross-hatching, lack of rouletting) that appear to be rather different from the DGB ceramic assemblage comprehensively described by David (2008) and found across the DGB sites. This ‘non-DGB’ ceramic suite appeared in Units 21, 27 and 30, in all cases from levels underlying those yielding DGB pottery. We might then be justified in calling this material ‘pre-DGB’ ceramics, but the radiocarbon dates from these levels complicate the matter. Examination of the radiocarbon chronology (Figure 3) implies that DGB pottery from the lowest levels of Unit 6 is contemporary with the non-DGB pottery in Unit 27 Level 10, while the non-DGB pottery from Unit 30 Level 9 comes from a level contemporary with the main period of DGB occupation in the early 15th century AD! This may be due to contamination of dated materials from one of the latter units; we should also note that the deepest levels yielding non-DGB ceramics in all of these units did not provide us with charcoal samples. The evidence for pre-DGB ceramics from various areas around DGB-1 seems quite convincing, but its chronology requires further elucidation.

The archaeological survey undertaken from Itéré toward Keroua located significant amounts of cultural materials in a variety of contexts, but especially in the transitional environments between plains and mountains, where in other parts of the southern Lake Chad Basin large numbers of archaeological sites have also been found (MacEachern 2012a). These environments may be particularly significant in this area during the middle of the second millennium AD, when both the DGB-1/-2 site complex and the Wandala capital at Keroua were occupied. Non-local cultural materials were recovered during the 2008 excavations on DGB-1, and it would seem that the nearby centre of an expanding polity with international entanglements would be a likely source for such materials (MacEachern 2012b). Investigation of intervening sites is thus a priority for future research. Janson has, as noted in 2012, undertaken further survey and excavation of some of the sites located in 2010-2011, and will conduct further fieldwork in this region in the near future. A second priority at this point will be a geomorphological analysis of terrace systems and their histories in and around the DGB-1/-2 site complex, with the goal of understanding how and when the modern, heavily domesticated landscape of the area came to be, and whether it was also characteristic of DGB times.

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