For project priority units we are continuing with Level 2 assessment as set out previously (Bogaard *et al.* 2005); this involves quantitative assessment of major botanical categories in a random subsample of the 4mm and 1mm fractions.

The results of Level 1 and 2 assessment this season expanded on and confirmed previous results: the dominant food plant categories are glume wheats (especially the extinct "new type" or "striate emmeroid", but also standard emmer, one-grain and two-grain einkorn), with widespread evidence of routine dehusking of glume wheat across the site. Free-threshing wheat (bread wheat) and barley are also present, including a range of barley types. Lentil was a common companion crop amongst pulses, although pea, bitter vetch and grasspea remains were identified. Among fruits, after the very common hackberry (*Celtis*), some wild-type *Pistacia,* and occasional acorn (*Quercus*) were also found. Flotation finds of these fruits are reinforced by hand-collected samples by the excavators that are predominantly *Celtis* followed by some large acorn pieces, with more occasional plums and pulses (see §8). Small wild, or weed seeds are dominated by *Bolboschoenus glaucus* sedge nutlets (also known under the old synonym *Scirpus maritimus*), which probably entered the record by a variety of routes, including animal dung burned as fuel. Further discussion below explores some basic quantitative patterns relating to Level 1 analysis of samples from B.114 and B.118.

In addition to Level 1 and 2 assessment, one of us (AB) conducted full identification/quantification of 29 samples from key buildings (B.79, B.80, B.89 and Sp.493), following the protocols outlined in Bogaard *et al.* 2013. Photos were taken of a few problematic weed types for further identification. Analysis of B.80 is now more or less complete, while that of B.79 and Sp.493 is well underway and will be completed through ongoing work by Laura Green (see §9). A series of dirty floors from B.89 were analysed and remaining samples from primary contexts will be completed in future seasons.

Overall, the strategy for full botanical study during the final seasons is emerging, and focuses on full analysis of *in situ* burning contexts from a series of buildings in Level South O (especially B.76, B.79, B.80, B.96, B.97) that provide an opportunity to gain understanding of a 'neighbourhood' comparable to North G; other buildings that provide crucial chronological coverage (such as B.118, B.89, TPC's Sp.493); and completion of B.52 (pre-burning), B.77 (pre-burning), B.113, B.131 and B.132 in the North Area. Below we summarise this season's findings that relate to the 2015 excavations.

2 - Preserved grain stores and other priority contexts in TPC

Naked barley bins

These bins come from the same room (Sp.493) as bins excavated previously in 2013 and appear to have been filled with clean stores of naked barley grains. In some deposits, charred grains were inter-bedded with ashy deposit consisting of pure silificied (phytolith) remains of barley chaff. Full analysis of two units ((22709) and (22713), the latter representing the infill of a partially destroyed bin excavated by Laura Green) yielded potential weed seeds as well as well preserved barley grains. These deposits thus provide key opportunities to isolate the arable weed flora and to assess its ecology (see also §9 below).

Other priority contexts in TPC

These mostly included building fill units of low or very low botanical density and containing a mixture of residue from various activities such as crop processing, food preparation and dung fuel use. Two units had medium and high density and they represent 'burnt fill' above the barley bins in Sp.493 (see above); the fill is most likely post-Neolithic in age but is mixed and includes material from preceding (Neolithic) levels. This may explain the presence of barley grains; also found in the sample are glume wheat and free-threshing

wheat grains. Notable is a relatively high quantity of sedge seeds, tubers and fragments of parenchyma. Ethnographic studies indicate a number of possible uses of sedge stems, leaves and tubers, including as matting material that can be used for lining and/or covering storage containers (e.g. Erkal-Tsetsekos 2006: 85-98).

Suitable material for ^{14}C dating was selected from eleven TPC units. Following the request by the excavators, 1/8 subsamples of 1mm sample fractions from two of the units were fully sorted and quantified; the units are thought to derive from post-Neolithic/Chalcolithic (31351) and Hellenistic levels (22712). The sample from (31351) (Fl. 12173) is a fraction of the deposit recognised as a concentration of charred grain in the fill of Sp.577 and seems to derive from a one-off disposal of burnt material. The sample from (22712) (Fl. 11887) represents fill of a fire-related feature (fire pit?) composed of fine layers of ash with inter-bedding layers of burnt soil; although seemingly intact, mixing with earlier deposits cannot be excluded here since the fire installation does not seem to be in its 'original' location (it is found in a room fill). Both samples are of very high density ((31351) = 912 items per litre sediment; (22712) = 214) and dominated by cereal remains. The range of cereal types is very similar to the Neolithic spectrum at Çatalhöyük and includes one- and two-seeded einkorn, emmer, 'new type' glume wheat, free-threshing wheat and barley (hulled in the Chalcolithic deposit). The Chalcolithic sample is mainly composed of two-seeded einkorn grain, emmer glume bases and (hulled) barley grain. The Hellenistic sample contains a relatively large quantity of 'new type' glume wheat glume bases, followed by emmer and einkorn glume bases; also prominent are einkorn grains (mostly two-seeded type) and grains of wild einkorn/*Triticum boeticum*; in smaller numbers grain of free-threshing wheat, emmer and 'new type' glume wheat were also found; bitter vetch is the only registered pulse crop in this sample. The wild component of the Hellenistic sample is quite abundant and highly diverse, containing some 17 different taxa among which most numerous are seeds of a wild barley type and of medusa grass (*Taeniatherum caput-medusae*), as well as *Bolboschoenus glaucus* nutlets and seed endosperm probably of *Polygonum aviculare* type. These wild types have been known from the Çatalhöyük samples of Neolithic age and, unless their presence in the Hellenistic sample is a result of (post-)depositional mixing of the layers (or bioturbation), they may indicate continuity in the composition of wild/weed flora at the site.

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3 - Preserved grain stores in Building 131: 'new type' glume wheat spikelets

The extensive burning that closed Building 131 preserved extensive charred grain clusters, presumably from stores in the building at the time of the fire. These were hand excavated by Amy Bogaard and Lara Gonzalez Carretero, in addition to extensive flotation from associated sediments. Unit (22637) was a *c*.1 litre 'new type' glume wheat cluster near the oven in Sp.500 (Fig. 7.1). Grains were observed to be in 'spikelet articulation' before excavation, and some grain 'pairs' were recovered during excavation (i.e. fused in spikelet formation due to charring). Chaff was underrepresented, probably due to charring conditions. All chaff found was well preserved and represents the 'new type' (also sometimes called "striate emmeroid"). From (22656), in the 'alcove' Sp.556, a large concentration of 'new type' spikelets was found (Fig. 7.2). These are disarticulated spikelets, which were also in evidence as impressions on the floor/lower fill below the cluster. The presence of a human long bone (juvenile femur), visible in Figure 7.2, under this spikelet cluster indicates that it was not a 'normal' storage deposit.