

## **WET SIFTING PROCESS**

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### **I. INTRODUCTION**

Since 2005, systematic sifting of selected loci has been undertaken during the Dor field season. The purpose of sifting chosen loci is to collect small zooarchaeological remains, especially small animal remains including fish, small mammals, birds, reptiles and amphibian bone fragments. Systematic sifting is aimed to carry out full retrieval of all faunal remains in the site and thus to increase significantly species richness and diversity and skeleton completeness. In 2006 we added sub-sampling of botanical remains from these same contexts as well as taking a control-sample of soil. Complementary to the zoo-archaeological importance of sample-sifting, these same samples provide for full retrieval of other small finds (coins, beads etc.) and thus provide a check on what we may be missing when artifacts and eco-facts are hand-picked only.

Large-scale excavations, in which complex stratigraphy from various time periods and contexts is uncovered, such as is the case at Dor, call for a flexible method which would allow sampling loci for high-resolution sifting on a daily basis while taking into account other excavation requirements and feasibilities. The working hypothesis of our study is that where total recovery is unfeasible, a well-controlled high resolution sample is better than a half-hearted attempt to screen a lot - albeit at low resolution of sieving, picking and analysis. The methods defined below are aimed at implementing such a strategy.

## **II. CHOOSING LOCI FOR SIFTING**

The archaeozoologist will choose the loci for sifting in co-ordination with the area supervisor. The location, contextual quality and chronological affiliation of the locus in question should be considered, in order to have a reasonably valid sample of sifted loci from all over the excavation as well as from the different strata and contexts represented. This information will direct the sampling strategy to ensure that all types of relevant contexts are adequately sampled. As a rule, “low quality” loci (e.g. ones known to be mixed) should not be sifted; and all prime contexts should be at least partially sifted. At least some loci of ‘intermediate’ quality (e.g. sealed fills which are not primary) should be sifted as well. The amount of buckets to be sifted depends on the on-site decision of the archaeozoologist and the area supervisor, and is liable to change according to available time, labor, and locus size. One should keep in mind that the amount of sifted material per locus should be in proportion to locus size. We need pair-wise comparisons of sifted vs. un-sifted samples, and therefore this proportion should not normally exceed 50%. This too is subject to reasoned decision. There may be loci that are so important

that the supervisor or zooarchaeologist would be loath to loose anything – and they would be 100% sifted (and not used for comparative purposes). On the other hand there might be primary contexts of such magnitude that sampling more than a tiny proportion may prove impractical (we should be so lucky...)

### **III. EXCAVATING AND SIFTING PROCEDURE OF A CHOSEN LOCUS**

When a locus or part of it is designated to be sifted, all the baskets excavated prior to the designation should be closed, and new ones opened. All the loose dirt from the locus should be scooped and the dirt-buckets removed from the area. prior to beginning the procedure.

Dirt-buckets destined for sifting should be lined with one mm mesh. Please note that the mesh should not be folded, and should overlap the edges of the bucket so that it can be easily lifted out with the bucket's contents, without spilling any. Buckets should be uniformly filled to about  $\frac{3}{4}$  of their capacity. All of the excavated material (except stones) from the locus should be moved as is into the bucket, without removing bones, pottery, or any other finds into separate baskets. If a 'special' find (that you feel cannot risk a dunking in sea-water) is made, it can be tagged separately (in the usual manner for special finds) but the tag should still carry an (*S*) designation (see below). The entire sifting bucket should be tagged (see below) and then sent to the sifting point at the beach.



Should a sifting locus remain opened after it was sampled, all sifting baskets should be closed and new containers and tags issued for pottery, bones etc. in the normal procedures.

Before beginning the sifting process a small soil sample should be removed from one of the buckets, tagged (see below) and left aside. About 10% of the sample (but at least half a bucket) should be set aside for floatation (about which see below). The rest of the buckets will be sifted in seawater by simply grabbing the net securely closed and vigorously swishing it in the surf. Be sure to put the bucket's tag in the net before it is sent to the glasshouse.



The floatation sub-sample is sifted in large can full of sea-water instead of directly in the sea. Secure the mesh to the top of the tank with large rubber bands provided for this purpose, and swish the contents, collecting the light vegetal fraction which floats to the top with a scoop of fine meshing material. The floated material should be left in the scoop itself or put in an open box on clean tissue, together with 'light botanical' tag (see below). Write on the tag how many buckets were floated. The heavy fraction (small pebbles, bones etc.) that remains in the net are treated the same as the rest of the sifted material.

When the sifted buckets arrive at the "glass-house" (still in the nets and each with its tag in it!) they will be soaked in fresh water and left to dry in the shade – preferably still on

the mesh or (if we are short of mesh) on clean paper. The tag should be left visible on the sifted material (held down so it won't blow away).

#### **IV. THE RECORDING OF SIFTING SAMPLES**

When a sifting sample is taken, two types of tags should be prepared by the area recorder:

(A) 'identity tags' for the actual buckets – each of the buckets should be marked by a tag containing the date, area and locus number from which it was taken. These should follow the sediment throughout the entire process described above – but their only purpose is to identify the sample – they are not recorded in the basket lists or database, and have no fixed format.

(B) Finds-tags for the objects in the sifted buckets. These should conform to the usual formats of basket tags at Dor, except that they should be marked by the “S” sign for “sifting”. An “(S)” should also be put in the “comments” field of the basket list for each tag issued, and the total number of buckets sent to be sifted noted. At the time the sample is sent down to the beach (and thence to the glasshouse), the recorder / area supervisor on the tell do not know what will be found in the sifting process (but they can make a good guess...) Six tags should be prepared for each batch of sifting buckets sent down: 1. macro fauna 2. micro fauna 3. pottery 4. light botanical (from floatation) 5. heavy botanical (which will be extracted from the remaining sediment during picking) 6. sediment sample. Depending on period and type of sediment, the recorder might decide to also issue tags for flint and mollusks forthwith These tags (which as yet do not have any find-container attached to them) should be given to the sifting team. If additional

finds are made while picking (e.g. beads, coins etc.) the pickers will return them to the recorder who will issue additional tags.

## **V. PICKING PROCESS**

The entire batch of sifted material should be sort once it dried. During the field work only rough picking will take place, and the remaining material will be saved (in a cloth bag, tied with the "micro fauna" tag) for fine picking in the lab.

The rough picking process consists of the separation of pottery (only diagnostic and fairly big sherds should be picked, unless the locus was defined as a "restoration locus", and then every single sherd should be saved); bones; shells and (heavy) botanical remains. 'Heavy botanical remains' refers to charcoal and other vegetal matter which did not float to the top in the floatation process but is found in the sediment during picking. If other artifacts (such as flint, beads, coins, slag etc.) are found, they should be separated and handed back to the area-recorder to be listed and labeled. Each of the different sorted materials should be packed and tagged with the appropriate tag prepared beforehand (see above) -- including the sediment sample and the light-botanical remains that were collected in the beginning of the process. Use a suitable pack (micro fauna should be packed in cloth bag, delicate artifacts in "zip lock" bags or small boxes, pottery in a bucket for further washing in purpose to be ready for pottery reading).