

The Environmental Context and Function of Burnt-Mounds: New Studies of Irish *Fulachtaí Fiadh*

Supplementary Data

| Site | | A024/22 | | | | | | | A024/23 | | |
|---|-------------------|---------|-----|-----|-----|-----|-----|-----|---------|-----|-----|
| Feature | | 3 | 3 | 4 | 8 | 22 | 22 | 38 | 52 | 18 | 19 |
| Sample | | 4 | 6 | 2 | 10 | 78 | 84 | 82 | 28 | 101 | 124 |
| Volume (ml) | | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 |
| Matrix (Relative abundance) | | | | | | | | | | | |
| Buds | | - | 1 | 1 | - | - | - | 1 | 1 | - | 1 |
| Bud scales | | - | 1 | 3 | 1 | 3 | 1 | 2 | 1 | 3 | 3 |
| Charcoal | | 2 | - | 2 | 4 | 3 | 1 | 3 | 3 | 1 | 2 |
| Gravel | | - | - | 1 | 2 | - | 1 | 2 | 2 | - | 1 |
| Insects | | 2 | - | 1 | 1 | 3 | 1 | 2 | 3 | 2 | 2 |
| Monocot stems | | 1 | 3 | 2 | 2 | 1 | 1 | - | 2 | - | - |
| Rootlets | | 3 | 5 | - | 5 | - | 5 | - | - | - | - |
| Wood fragments | | 1 | 2 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 |
| Plant macrofossils (Total counts) | | | | | | | | | | | |
| (c) <i>Hordeum</i> sp (Barley) | charred grain | - | - | - | 1 | - | - | - | - | - | - |
| (q) <i>Hippuris vulgaris</i> (Mare's tail) | fruit | 6 | - | - | - | - | - | - | - | - | - |
| (q) <i>Ranunculus</i> subgenus <i>Batrachium</i> sp(p) (Crowfoot) | achene | 1 | - | 1 | - | - | - | - | 1 | - | - |
| (r) <i>Persicaria maculosa</i> (Redshank) | nutlet | - | - | - | - | - | - | 1 | - | - | - |
| (r) <i>Sonchus asper</i> (Prickly sow-thistle) | achene | - | - | - | 1 | - | - | - | - | - | - |
| (t) <i>Alnus</i> sp (Alder) | wood fragment | - | 1 | - | - | - | - | 1 | - | - | - |
| (t) <i>Alnus glutinosa</i> (Alder) | fruit | - | - | - | - | 1 | 3 | 2 | 4 | 5 | - |
| (t) <i>Alnus glutinosa</i> (Alder) | female cone | - | - | - | - | - | - | 3 | - | - | 1 |
| (t) <i>Betula/Alnus/Corylus</i> sp (Birch/alder/hazel) | wood fragment | - | - | 1 | - | - | - | - | - | - | - |
| (t) <i>Betula/Alnus</i> sp (Birch/alder) | wood fragment | - | - | 1 | - | - | - | - | - | - | - |
| (t) <i>Betula</i> sp (Birch) | charcoal fragment | - | - | - | - | - | - | - | 1 | - | - |
| (t) <i>Betula pendula</i> (Silver birch) | fruit | - | - | - | - | - | - | - | 1 | - | - |
| (t) <i>Betula pubescens</i> (Downy birch) | fruit | - | - | - | - | - | - | - | - | - | 2 |
| (t) <i>Betula pendula/pubescens</i> (Silver/downy birch) | fruit | - | - | - | - | 1 | 1 | 2 | 2 | 9 | 3 |
| (t) <i>Corylus avellana</i> (Hazel) | nut fragment | - | - | 3 | - | 1 | - | 1 | 1 | 5 | 2 |
| (t) <i>Corylus avellana</i> (Hazel) | charcoal fragment | - | - | 1 | 1 | - | - | - | 2 | - | 1 |
| (t) <i>Corylus avellana</i> (Hazel) | wood fragment | - | - | - | - | - | - | 1 | - | - | 1 |
| (t) <i>Eurynchium striatum</i> (Moss) | branch | - | - | - | - | 4 | - | - | 3 | 3 | 1 |

| | | | | | | | | | | | |
|---|---------------------|-----|----|---|----|----|----|---|---|----|----|
| (t) <i>Fraxinus excelsior</i> (Ash) | charcoal fragment | - | - | 1 | 1 | - | - | - | - | - | - |
| (t) <i>Fraxinus excelsior</i> (Ash) | wood fragment | - | - | - | - | - | 1 | - | - | - | - |
| (t) <i>Ilex aquifolium</i> (Holly) | fruitstone | - | - | - | - | 1 | - | - | - | - | - |
| (t) <i>Pinus</i> sp (Pine) | wood fragment | - | - | - | 3 | - | - | - | - | - | - |
| (t) <i>Prunus domestica</i> / <i>spinosa</i> (Plum/sloe) | wood fragment | - | - | 1 | - | - | - | - | - | - | - |
| (t) <i>Prunus padus</i> (Bird cherry) | fruitstone fragment | - | - | - | - | - | 3 | - | - | - | - |
| (t) <i>Rubus fruticosus</i> agg. (Bramble) | fruitstone | - | 1 | - | - | - | 1 | - | - | 1 | 2 |
| (t) <i>Rubus idaeus</i> (Raspberry) | fruitstone | - | - | - | - | - | 1 | - | - | - | - |
| (t) <i>Sorbus</i> sp (Whitebeams) | fruitstone fragment | - | - | - | - | 1 | - | - | - | - | - |
| (t) <i>Taxus baccata</i> (Yew) | fruitstone | - | - | - | 1 | - | 1 | - | 1 | - | 5 |
| (t) <i>Taxus baccata</i> (Yew) | fruitstone fragment | - | - | - | - | - | - | - | - | 2 | 17 |
| (t) <i>Thuidium tamariscinum</i> (Moss) | branch | - | - | - | - | 10 | - | - | 7 | 33 | - |
| (t) <i>Ulmus</i> sp (Elm) | charcoal fragment | - | - | - | 1 | - | - | - | - | - | - |
| (w) <i>Ajuga reptans</i> (Bugle) | seed | - | - | - | - | - | - | 3 | - | - | - |
| (w) <i>Alisma</i> cf. <i>plantago aquatica</i> (Water plantain) | fruit | - | 2 | - | - | - | - | - | - | - | - |
| (w) <i>Calliergon giganteum</i> (Moss) | branch | 26 | - | - | - | - | - | - | - | - | - |
| (w) <i>Caltha palustris</i> (Marsh-marigold) | seed | 5 | - | - | 2 | - | - | - | - | - | - |
| (w) <i>Carex</i> cf. <i>paniculata</i> (Greater tussock-sedge) | biconvex nutlet | - | 6 | - | 2 | - | - | - | - | - | - |
| (w) <i>Filipendula ulmaria</i> (Meadowsweet) | achene | - | - | - | - | 1 | - | - | - | - | - |
| (w) <i>Hydrocotyle vulgaris</i> (Marsh pennywort) | fruit | - | - | 2 | - | - | - | - | - | - | - |
| (w) <i>Mentha</i> cf. <i>aquatica</i> (Aquatic mint) | seed | 2 | - | - | 1 | - | - | - | - | - | - |
| (w) <i>Menyanthes trifoliata</i> (Bogbean) | seed | - | 1 | - | 1 | 1 | - | - | 1 | - | - |
| (w) <i>Neckera crispa</i> (Moss) | branch | - | - | - | - | 33 | 1 | 4 | 6 | 5 | 4 |
| (w) <i>Ranunculus flammula</i> (Lesser spearwort) | achene | 11 | 9 | - | 7 | - | - | 4 | - | - | - |
| (w) <i>Rorippa nasturtium-aquaticum</i> (Water-cress) | seed | - | 9 | - | - | - | - | - | - | - | - |
| (w) <i>Sparganium erectum</i> (Branched bur-reed) | fruitstone | - | 1 | - | 1 | - | - | - | - | - | - |
| (w) <i>Sparganium erectum</i> (Branched bur-reed) | fruitstone fragment | - | 8 | - | - | - | - | - | - | - | - |
| (w) Valerianaceae sp(p) (Valerian family) | achene | 2 | - | - | - | - | - | - | - | - | - |
| (x) <i>Carex</i> sp(p) (Sedges) | biconvex nutlet | 2 | - | - | 1 | - | 2 | 3 | 2 | - | - |
| (x) <i>Carex</i> sp(p) (Sedges) | trigonal nutlet | 22 | 2 | 7 | 4 | - | 5 | - | 4 | - | - |
| (x) <i>Carex</i> sp(p) (Sedges) | utricle | 5 | - | - | - | - | - | - | - | - | - |
| (x) <i>Cenococcum geophilum</i> (Soil fungus) | sclerotia | - | - | - | 8 | - | 15 | 3 | - | 1 | - |
| (x) <i>Cerastium</i> sp (Mouse-ear) | seed | - | - | - | - | - | - | 1 | - | - | - |
| (x) <i>Cirsium</i> sp (Thistle) | achene | - | - | - | 1 | - | - | - | - | - | - |
| (x) <i>Hypericum</i> sp (St. John's-wort) | seed | - | - | - | - | - | 1 | - | - | - | - |
| (x) <i>Juncus articulatus</i> type (Rushes) | seed | 102 | 94 | 9 | 52 | - | - | - | - | - | - |
| (x) <i>Juncus effusus</i> type (Rushes) | seed | - | - | - | - | - | 1 | - | - | - | - |

| | | | | | | | | | | | |
|---|---------------|---|---|---|---|---|----|---|---|----|---|
| (x) <i>Juncus</i> sp(p) (Rushes) | seed | - | - | - | 9 | 1 | - | - | - | - | - |
| (x) Musci sp(p) (Indeterminate mosses) | branch | 2 | 6 | - | 6 | 7 | - | 2 | 6 | - | - |
| (x) Poaceae sp(p) (Grass family) | caryopsis | 2 | - | - | 2 | - | - | - | - | - | - |
| (x) <i>Potentilla</i> sp (Cinquefoils) | achene | - | 5 | - | - | - | 4 | - | - | - | - |
| (x) <i>Prunella vulgaris</i> (Selfheal) | seed | - | - | - | 5 | - | - | - | 1 | - | - |
| (x) Pteridophyta (Ferns) | sporangium | - | - | 1 | - | - | - | 1 | - | 31 | - |
| (x) <i>Ranunculus</i> subgenus <i>Ranunculus</i> sp(p) (Buttercups) | achene | - | - | - | 5 | - | 14 | 2 | - | 1 | - |
| (x) <i>Rumex</i> sp (Dock) | nutlet | - | - | - | 1 | - | - | - | - | - | - |
| (x) <i>Urtica dioica</i> (Nettle) | achene | 1 | - | - | - | - | - | - | - | - | - |
| (x) <i>Viola</i> sp (Violet) | seed | - | - | 1 | 1 | 1 | - | - | - | - | - |
| (x) <i>Viola</i> sp (Violet) | seed fragment | - | 3 | 1 | 1 | - | 7 | 2 | 2 | - | - |

(c: cultivated plant; q: aquatic; r: ruderal; t: trees/shrubs and woodland taxa; w: wetland/damp ground; x: wide niche)
Relative abundance is based on a scale from 1 (lowest) to 5 (highest).

Table S1 Plant macrofossils from Killescragh (A024/22 and A024/23)

| Site | | Caraunmore | Coonagh West | | | | |
|--|---------------------|------------|--------------|-------|------|-------|-------|
| Feature | | 27 | 72 | 72 | 74 | 74 | - |
| Column | | - | 1 | 1 | 3 | 3 | 2 |
| Section | | - | 3 | 3 | 5 | 5 | 2 |
| Sample | | 43 | 0-10 | 50-60 | 0-10 | 30-40 | 30-45 |
| Volume (ml) | | 300 | 200 | 200 | 200 | 100 | 200 |
| Matrix (Relative abundance) | | | | | | | |
| Buds | | 3 | 3 | 3 | 4 | 4 | 2 |
| Bud scales | | 3 | 3 | 3 | 4 | 4 | 1 |
| Charcoal | | 4 | - | 1 | 1 | - | - |
| Gravel | | 5 | - | - | - | - | - |
| Insects | | - | 2 | 2 | 1 | 2 | 1 |
| Sand | | 5 | - | - | - | - | - |
| Wood fragments | | 5 | 4 | 5 | 4 | 4 | 4 |
| Plant macrofossils (Total counts) | | | | | | | |
| (h) <i>Rumex acetosella</i> (Sheep's sorrel) | nutlet | - | - | - | - | 1 | - |
| (q) <i>Callitriche</i> sp (Water star-wort) | fruit | - | 3 | 1 | 2 | 3 | - |
| (q) <i>Ranunculus</i> subgenus <i>Batrachium</i> sp (Crowfoot) | achene | - | 1 | - | - | 1 | - |
| (r) <i>Sonchus asper</i> (Prickly sow-thistle) | achene | 3 | - | - | - | - | - |
| (t) <i>Alnus</i> sp (Alder) | charcoal fragment | 6 | - | - | - | - | - |
| (t) <i>Alnus</i> sp (Alder) | wood fragment | - | - | 1 | - | - | - |
| (t) <i>Alnus glutinosa</i> (Alder) | fruit | 11 | 34 | 14 | 12 | 7 | - |
| (t) <i>Alnus glutinosa</i> (Alder) | female cone | 5 | 12 | 15 | 31 | 2 | - |
| (t) <i>Betula pendula/pubescens</i> (Silver/downy birch) | bract fragment | 1 | - | - | - | - | - |
| (t) <i>Betula pendula/pubescens</i> (Silver/downy birch) | fruit | 16 | - | - | - | - | - |
| (t) <i>Corylus avellana</i> (Hazel) | nut fragment | - | - | 6 | - | - | - |
| (t) <i>Corylus avellana</i> (Hazel) | charcoal fragment | 23 | - | - | 1 | - | - |
| (t) <i>Corylus avellana</i> (Hazel) | wood fragment | 1 | - | - | - | - | - |
| (t) <i>Crataegus monogyna</i> (Hawthorn) | fruitstone | - | - | - | 1 | - | - |
| (t) <i>Fraxinus excelsior</i> (Ash) | wood fragment | 1 | - | - | - | - | - |
| (t) <i>Ilex aquifolium</i> (Holly) | fruitstone | 3 | - | 2 | 3 | 4 | - |
| (t) <i>Oxalis acetosella</i> (Wood-sorrel) | seed | - | - | - | - | 1 | - |
| (t) <i>Prunus domestica /spinosa</i> (Plum/sloe) | charcoal fragment | 1 | - | - | - | - | - |
| (t) <i>Prunus spinosa</i> (Sloe) | fruitstone | - | - | - | - | 2 | - |
| (t) <i>Prunus</i> sp (Cherry) | fruitstone fragment | 11 | - | - | - | - | - |
| (t) <i>Quercus</i> sp (Oak) | bud | - | 4 | 2 | 6 | 27 | 3 |

| | | | | | | | |
|---|---------------------|-----|----|----|----|-----|---|
| (t) <i>Quercus</i> sp (Oak) | charcoal fragment | - | - | - | 1 | - | - |
| (t) <i>Quercus</i> sp (Oak) | cupule fragment | - | 1 | 2 | 6 | 1 | 1 |
| (t) <i>Quercus</i> sp (Oak) | wood fragment | 1 | - | 1 | - | - | 2 |
| (t) <i>Rubus fruticosus</i> agg. (Bramble) | fruitstone | 25 | 2 | 24 | 30 | 13 | - |
| (t) <i>Rubus idaeus</i> (Raspberry) | fruitstone | 5 | - | - | - | - | - |
| (t) <i>Rubus</i> sp (Brambles) | fruitstone fragment | - | 9 | 9 | 12 | 4 | - |
| (t) Salicaceae sp (Willow/poplar) | charcoal fragment | 2 | - | - | - | - | - |
| (t) <i>Ulmus</i> sp (Elm) | charcoal fragment | 2 | - | - | - | - | - |
| (t) <i>Ulmus</i> sp (Elm) | wood fragment | - | - | - | 1 | - | - |
| (w) <i>Ajuga reptans</i> (Bugle) | seed | 5 | - | - | - | - | - |
| (w) <i>Filipendula ulmaria</i> (Meadowsweet) | achene | 1 | - | - | - | - | - |
| (w) <i>Mentha</i> cf. <i>aquatica</i> (Aquatic mint) | seed | - | 2 | - | - | - | - |
| (w) <i>Ranunculus flammula</i> (Lesser spearwort) | achene | - | - | - | - | 26 | - |
| (w) <i>Ranunculus sceleratus</i> (Celery-leaved buttercup) | achene | - | 4 | - | - | 1 | - |
| (w) <i>Schoenoplectus</i> cf. <i>tabernaemontani</i> (Grey club-rush) | nutlet | - | - | - | 3 | 159 | - |
| (x) Apiaceae sp (Carrot family) | fruit | - | - | - | - | 1 | - |
| (x) Asteraceae sp (Daisy family) | achene | 1 | - | - | - | - | - |
| (x) Brassicaceae sp (Cabbage family) | seed | - | - | - | - | 1 | - |
| (x) <i>Carex</i> sp (Sedges) | biconvex nutlet | 8 | 1 | 1 | - | 6 | - |
| (x) <i>Carex</i> sp (Sedges) | trigonus nutlet | 6 | 5 | 16 | 2 | 2 | - |
| (x) <i>Cenococcum geophilum</i> (Soil fungus) | sclerotia | 1 | 3 | 4 | - | - | - |
| (x) <i>Juncus articulatus</i> type (Rushes) | seed | 2 | - | - | - | 43 | - |
| (x) <i>Juncus effusus</i> type (Rushes) | seed | 358 | - | - | - | - | - |
| (x) <i>Juncus</i> sp (Rushes) | seed | 20 | - | - | - | - | - |
| (x) Musci sp (Indeterminate mosses) | branch | - | - | 7 | 6 | 1 | 1 |
| (x) Poaceae sp (Grass family) | caryopsis | 5 | - | - | - | - | - |
| (x) <i>Ranunculus</i> subgenus <i>Ranunculus</i> sp (Buttercups) | achene | 23 | 11 | 5 | 7 | 3 | 1 |
| (x) Rosaceae sp (Rose family) | thorn | - | - | 3 | 1 | - | - |
| (x) <i>Rumex</i> sp (Dock) | nutlet | - | - | - | 2 | 1 | - |
| (x) <i>Stellaria holostea</i> (Greater stitchwort) | seed | - | - | - | 1 | 1 | - |
| (x) <i>Stachys</i> sp (Woundwort) | nutlet | 2 | - | - | - | - | - |
| (x) <i>Viola</i> sp (Violet) | seed | 7 | - | - | 1 | - | - |
| (x) <i>Viola</i> sp (Violet) | seed fragment | - | 1 | - | - | - | - |

(h: heathland; q: aquatic; r: ruderal; t: trees/shrubs and woodland taxa; w: wetland/damp ground; x: wide niche)

Relative abundance is based on a scale from 1 (lowest) to 5 (highest).

Table S2. Plant macrofossils from Caraunmore (A024/17) and Coonagh West (A005/2021)

| Depth (cm) | Vol. processed (litre) | Material Assessment | Environmental Assessment |
|------------|------------------------|---------------------------|--|
| 0-10 | 1 | Sparse, v. poor condition | Water dominated fauna (<i>Hydraena riparia</i> , <i>Agabus</i> sp., <i>Limnebius truncatellus</i>) indicates mixed stagnant/flowing regime. One <i>Aphodius</i> dung beetle present, some Carabidae of open ground, some Elateridae (<i>Athous</i> sp., <i>Agriotes</i> sp.) may indicate nearby woodland, supported by a fragment of elytra from the weevil <i>Polydrusus</i> sp.. |
| 40-50 | 1 | Sparse, poor condition | Fewer water taxa (only <i>Hydraena riparia</i>). Weevils (<i>Polydrusus</i> sp., <i>Strophosoma melanogrammum</i>) indicate woodland proximity with a carabid fauna characteristic of both open (<i>Pterostichus</i> sp.) and shaded ground (<i>Bembidion harpaloides</i>). |

Table S3. Coleoptera assessment of Cahiracon, Co. Clare (BGE 3/37/7 No. 5). assemblage zones as described in Table 5.1.

Cahiracon, Co Clare, small monolith (BGE 3/37/7 No 5)

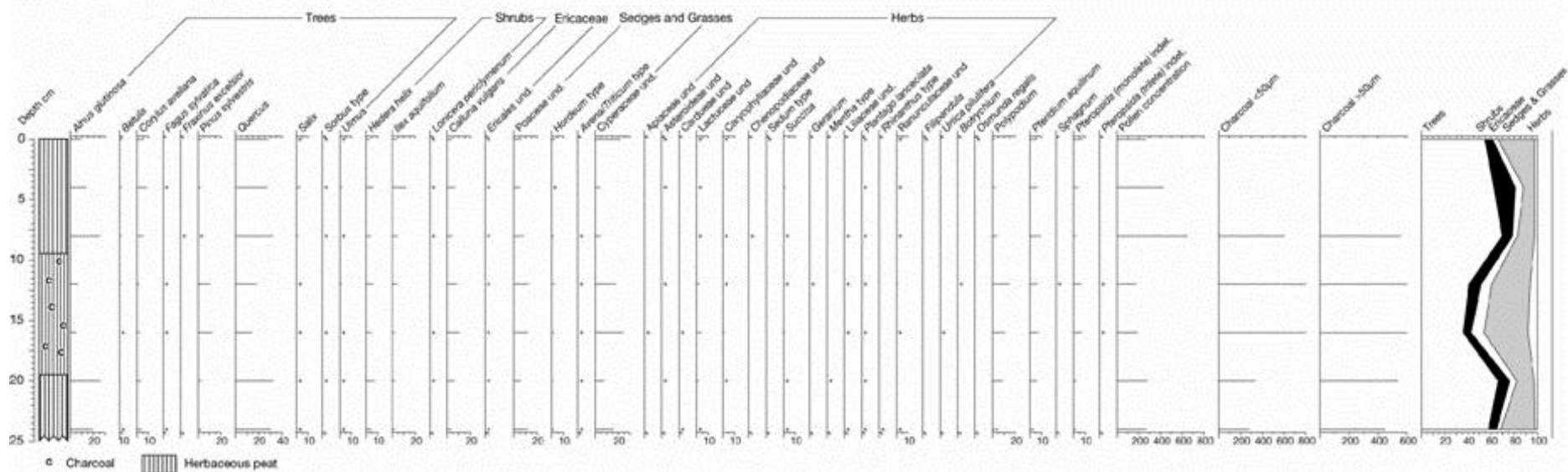


Fig. S1

Inchagaenoge Short Core (BGE 3/45/1 No 24)



Fig. S2

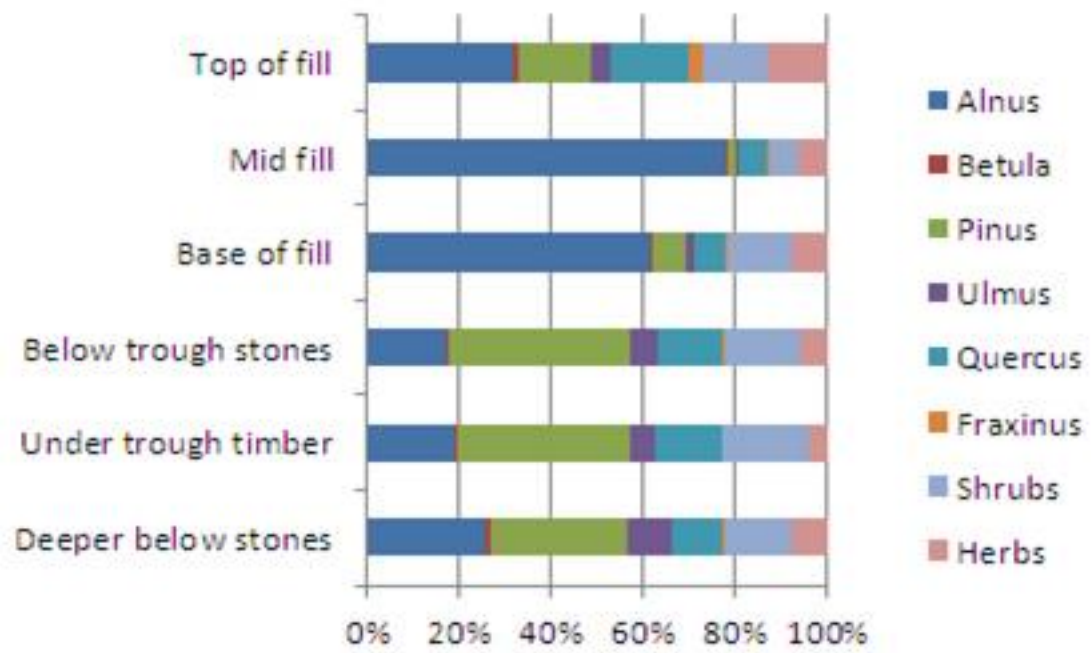


Fig. S3

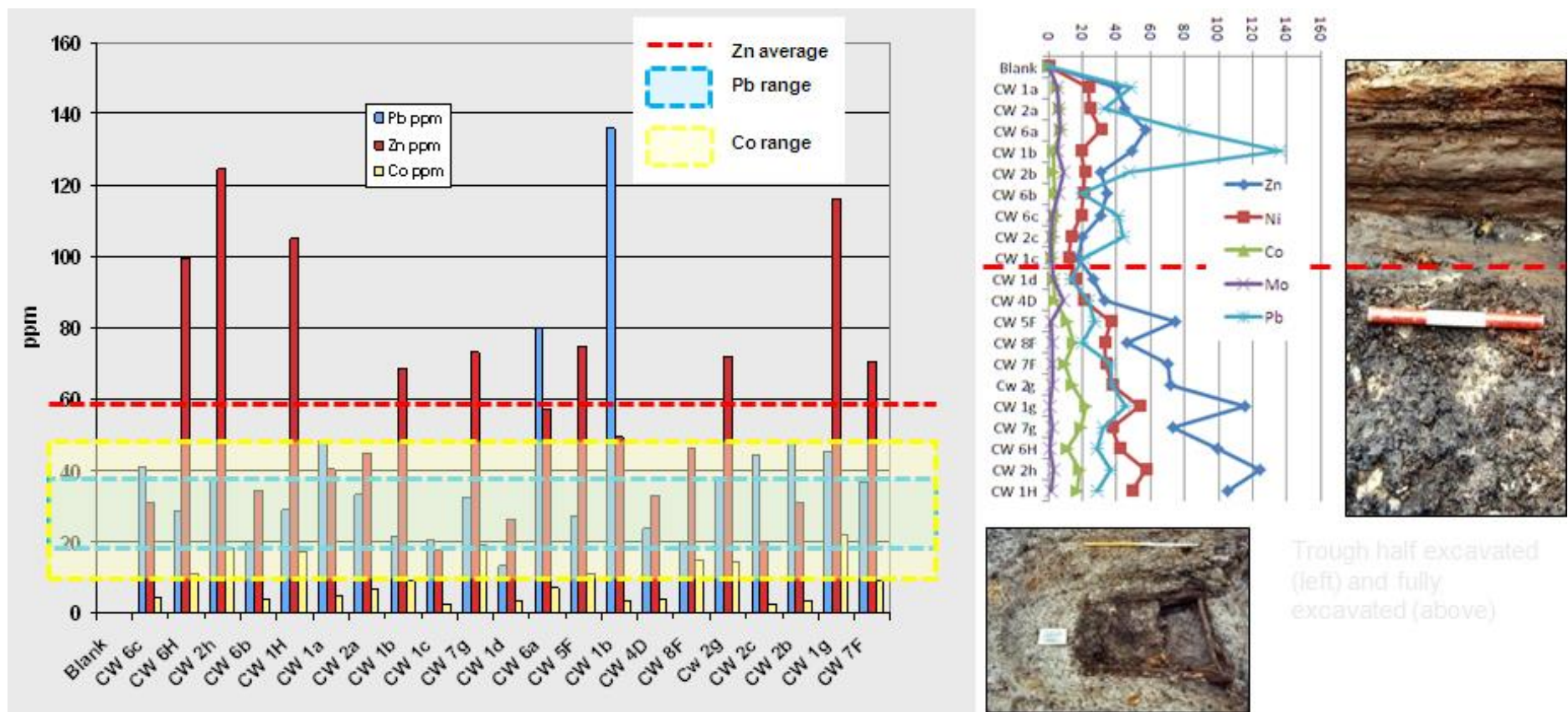


Fig. S4