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Innovation and consolidation for large scale digitisation of natural heritage

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Mass-imaging of microscopic and other slides

DELIVERABLE D3.2

Summary of published reports

Microscope slides form part of natural history collections in herbarium, museums and other collecting holding institutes. They are unusual compared to other preservation types as they are rarely curated as separate collections but stored as supplementary collections alongside a range of “classical” collection categories including entomological (both as whole slide mounts and preparations of parts like genitalia), botany, zoology, palaeontology and mineralogy. The preservation methods, labelling practices, dimensions and storage are very variable. It is probably due to these properties that there has been limited mass-imaging methodologies published and considered for slides as a discrete collection.

We present two mass-imaging papers that address microscope slides as discrete collections with adaptable methodologies for inventory and subject-level digitisation. There are many specialised techniques and equipment that are highly relevant for microscope slide research but none of these are mass-imaging are have not been discussed in our reports. Our first paper describes an inventory method aimed at capturing label data and other general metadata about the slide¹. We hope it also acts as an introduction to collection/digitisation managers considering mass digitisation of slides with a discussion on mass-imaging practices of microscope slides in other sectors. In the second paper we describe a methodology for mass imaging of microscope slide subjects (e.g. specimens or objects under a coverslip) that can be used to supplement the inventory level digitisation described in the first paper². In both papers, we tested our methodologies using entomological collections but ran successful trial on other collection types in both Earth and Life collections.

¹ Allan E, Livermore L, Price B, Shchedrina O, Smith V (2019) A Novel Automated Mass Digitisation Workflow for Natural History Microscope Slides. Biodiversity Data Journal 7: e32342. <https://doi.org/10.3897/BDJ.7.e32342>

² Allan, E. L., Price, B. W., Shchedrina, O., Dupont, S., Livermore, L., & Smith, V. (2018, December 10). A Low Cost Approach to Specimen Level Imaging of Natural History Microscope Slides using a DSLR System. <https://doi.org/10.31219/osf.io/dvmsh>

