

# Levinge lost treasures – plant specimens which have survived fire and undocumented for decades

This blog focuses on the discovery of the wealth of Irish and Indian plant specimens collected by Henry (Harry) Corbyn Levinge (1828-1896). Levinge grew up in Knock Drin Castle in County Westmeath. He graduated from Trinity College Dublin and worked as a civil engineer in Galway before moving to north-east India in 1854. There, he was employed by the East India Railway Company and the East India Irrigation and Canal Company before being promoted to Chief Engineer and Secretary to the Bengal Government. He held this post until his retirement from service in 1883.

During his time in India, Levinge appears to have developed a strong case of *Pteridomania* i.e. a total mania for ferns and he seems to have taken every opportunity to collect specimens. Lois began documenting his Indian specimens here at the gardens a few years ago and the work continues with lots of new discoveries.

When he returned from India he went back to live in Knock Drin Co. Westmeath and began collecting Irish specimens from around his estate and from many other parts of Ireland especially the Burren. These specimens are not limited to ferns and include a diverse array of plant species. While details of some of these specimens have been published in texts such as *The Plants of Westmeath*, (a three-part manuscript published in the *Irish Naturalist's Journal* (Levinge 1894) and in *The Levinge Herbarium* (Johnson & Knowles, 1903), Nora has found a large number of his undocumented specimens in the Irish Herbarium. What started as a small project for Nora when she arrived as an Erasmus student to the herbarium a few months has now grown tremendously with over 1,400 documented Irish specimens and the number continues to grow. With Nora's time running short in Ireland we have drafted more volunteers who have kindly offered their assistance in helping to document these lost treasures. Dean Rickaby, 3<sup>rd</sup> Year Botany Student at Trinity College Dublin, Anne Kenna – a retired teacher and current artist and Aidan Diskin our engineer/ horticulturalist who has been our long-time stalwart volunteer here in the herbarium.

## Share



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## Levinge collections in India and Lois

I began working on H. C. Levinge's fern collection at the National Herbarium in Glasnevin in 2013, shortly after completing my masters at Trinity. As a volunteer working with Noeleen, my primary focus was to catalogue Levinge's collection. Initially, this involved opening packages of specimens sent from Kew Gardens many decades ago and which have since been stored at Ireland's National Herbarium (Figure 1). The contents of these packages were largely unknown, although we did know they contained old fern specimens.

Some of these packages were in very poor condition, but despite not being mounted the specimens inside were remarkably well preserved and included 1,239 ferns from all around the world. It quickly became clear that all of the specimens had belonged to Levinge's private herbarium as each label contained "*Ex herb. H. C. Levinge*". Not only did these packages contain specimens he had acquired from other botanists, but over 200 were collected by Levinge himself. Levinge was obviously a significant botanical collector of his time with a strong interest in Pteridophytes (predominantly ferns).



Figure 1 (clockwise from top left): Lois with one of the packages sent from Kew; an example of what the specimens in these packages looked like; a fern collected by H. C. Levinge and mounted by Lois and the newly mounted specimen folders in the new section Levinge Herbarium in Glasnevin.

I took a four-year break from the Levinge Fern Project to complete my PhD in tropical ecology at Griffith University in Brisbane, but once I had finished I returned to the herbarium ready to continue to document and write up a manuscript on Levinge's vast collection of ferns that have thus far remained undocumented. When I returned to the herbarium at Glasnevin this year, we discovered six more packages from Kew Gardens which I'm currently documenting (Figure 2). It was thought that the majority of Levinge's herbarium was lost in a fire in the very inaptly named Whiteley's fire proof warehouse, however, we have found over 160 folios of his mounted specimens. Some labels on the

specimens refer to the fire, stating that they were recovered from the fire; this is very exciting for us to have his precious salvaged specimens.

One of my favourite aspects of this project has been discovering field notes written by Levinge himself. He wrote these directly on to the labels of his mounted specimens in herbarium but also in books he owned. His own copies of Colonel R. H. Beddome's *Handbook to the Ferns of British India, Ceylon and the Malay Peninsula* and C. B. Clarke's *Ferns of North India* can be found in the library at Glasnevin. Levinge has added notes in the margins of both of these books, and appears to have used them as a checklist to keep track of his collection. 86% of the 686 described species in Col. Beddome's book have been given a tick, which really shows what a prolific fern collector he was at the time!



Figure 2 Lois databasing some specimens from H. C. Levinge herbarium which is stored at the National Herbarium in Glasnevin.

### Levinge's new species and a new type specimen for Glasnevin

A particularly exciting find amongst Levinge's collection at the herbarium was what appears to be a syntype of *Adiantum levingei* Baker (Figure 3). The type of this species, which was named in honour of Levinge, is stored in the herbarium of Kew Gardens. It was collected in Chungthang, Sikkim in November 1882. The collection details of the specimen in Levinge's collection at Glasnevin and the type specimen in Kew are identical (Figure 4). Levinge has written "*sp. nov.*" i.e. species nova on his own label and given a citation to its botanical description which was published in the *Annals of Botany*.

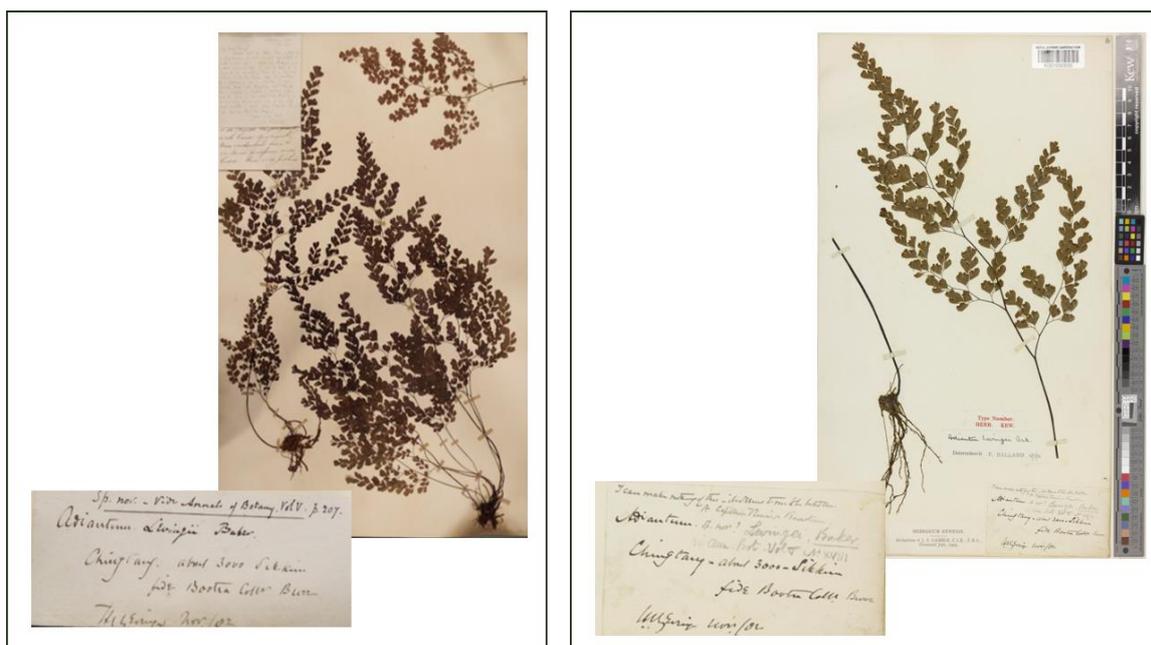


Figure 3 Left: A specimen of *Adiantum levingii* Baker which was discovered in Levinge's private herbarium at the National Herbarium in Glasnevin. Right: The type specimen of *A. levingii* Baker that is located in the herbarium of Kew Gardens (Image source: <http://apps.kew.org/herbcat/getImage.do?imageBarcode=K001090050>). This is a new syntype for the Herbarium at Glasnevin.

## Levinge collections in Ireland and Nora

I came to Ireland in March 2019 after completing Master's Degree in Experimental Biology and Botany at University of Zagreb, Croatia. I received a 5 month scholarship from the EU Erasmus programme to do an internship at the National Botanic Gardens Herbarium in Glasnevin and I began working on H. C. Levinge's Irish collections with Noeleen. I learnt a lot about the geography and plants of Ireland from looking at Levinge Herbarium specimens and we also had a field trip the Burren and seen some of the species living in the wild in the same places Levinge would have visited and collected plants .

Initially I set out to document specimens listed in Johnson & Knowles (1903) "The Levinge Herbarium" and Levinge (1894) "The Plants of Westmeath". I started to find other specimens, which were not listed, in these publications and wondered what to do; these I discovered were the exciting ones as they had been totally lost within the Irish collection and totally undocumented to date. The numbers so far exceeding those listed for example the publication on the Levinge Herbarium by Johnson & Knowles (1903) list just 71 species, ~100 specimens. So far, I have extracted 1381 specimens from the Irish herbarium and we are still not though all the herbarium presses! It great to have the extra help from Dean, Anne & Aidan to get through as my Erasmus placement at Glasnevin is ending soon and so I'm keen to complete this work.

One of my favourite specimens from Levinge Irish collections is *Dryas octopetala* (Mountain Avens) I got to see it in the wild in the Burren when I visited in April 2019, it was really exciting to see and visit the same localities where Levinge collected his specimen from the wild in 1891. (Figure 4).



Figure 4. Nora with some of the undocumented Irish collections of H.C Levinge, which she is continuing to find! Above the Johnson & Knowles “The Levinge Herbarium” blue book published in 1903; *Dryas octopetala* collected by Levinge and spotted by me in the same locality in the Burren in April 2019.

## Future directions for the growing Levinge Project

A sign of his botanical and scientific importance H.C. Levinge's obituary was published in *Nature* (1896). A famous botanist at the time Clarke considered Levinge's death as a "loss to botanic science". Another obituary, which appeared in the *Irish Naturalist's Journal* (1896), remarks that while Levinge began his botanical work relatively late in life he made significant contributions and described his specimens as "famous for their beauty and perfection of the drying".

The Levinge Fern Project has expanded vastly beyond its original scope as is fully cataloguing his Irish collections, which are not limited to ferns and include a diverse array of plant species. So far, Lois has mounted a third of his foreign fern specimens that were in the "lost" packages from Kew Gardens and presumed burnt in that unburnable warehouse fire. Nora has found an unprecedented number of undocumented Levinge Irish specimens, so the work continues. We would really welcome the support and help of patient and enthusiastic volunteers to complete this project.

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