

The Scientific and Cultural Legacy of Leichhardt's Botanical Collections

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Ludwig Leichhardt landed in Sydney on 14 February 1842. By virtue of his education and experience, he would have been one of the most highly qualified scientists to have reached Australia to that time. He collected plants assiduously during his travels in Australia and nearly half the contents of his Australian diaries are devoted to observations and descriptions of the plants he encountered. He intended to publish on the flora of Australia, but constant travelling until his disappearance meant that he never had the opportunity to do so.

In 1842 and 1844 Leichhardt sent about 700 plants to Berlin, including fungi and wood samples, but few specimens survived the bombing of the Berlin herbarium. He also sent a large consignment of plants to Paris in 1844, including a collection of wood specimens for which he was paid 5 francs per specimen. Most, if not all, of this collection is still in the herbarium of the Museum National d'Histoire Naturelle, Paris. Some of the plants in the Museum probably also include specimens sent to his friend Gaetano Durando. However, Leichhardt retained the bulk of his collections in Sydney and after it became clear that Leichhardt would not return from his last expedition, his friend and landlord, John Murphy, passed his notes, books and collections over to the Australian Museum in Sydney in 1851, possibly an arrangement made by Leichhardt in the event of his not returning. There they remained until Ferdinand von Mueller arranged to work on them in 1862. Altogether about 3500 plants are held in Australian herbaria.

Most of the plants were collected before Leichhardt started on his expedition to Port Essington in 1844 and come from around Sydney, from northern New South Wales and from south-eastern Queensland. At the time of Leichhardt's arrival, there were only about 4200 plants described from Australia, chiefly from the work of Robert Brown. These plants had been described mostly from habitats close to the principal towns and from localities easily accessible from the coast, whereas Leichhardt's collections came from areas not previously visited by earlier botanical collectors. His travels between 1842 and 1844 were on the fringes of white settlement, before there had been widespread land clearing and before the expansion of cities and towns. His plant collections are therefore an important record of the original vegetation in the areas traversed and in some cases are the only records for the areas in which they were collected. The availability of the diaries published on the occasion of Leichhardt's 200th birthday in 2013¹ has allowed the plant specimens to be more precisely located, particularly as Leichhardt usually wrote the date of collection on his plant labels. Already the

data in the new translation together with Leichhardt's specimens are being used to reconstruct environments.

If Leichhardt knew the genus and/or species name of the plant he collected, he wrote these on the label, but because many plants were undescribed at the time, he used his own descriptive German names, writing to his friend Robert Lynd that: "I cannot determine a single plant and I have to give them my own names to keep them separate in my memory." Examples of such naming include:

Spatelblattrige gezahnte *Aster*. [The spatulate-leaved dentate *Aster*]

Doppeltgefiederte, klein fiedrige, Haken dornige Busch Rebe [The bipinnate, small pinnae, hook-thorned bush vine]

Eng u steifblattrige *Dillenia* [Narrow and stiff-leaved *Dillenia*]

Die weißblättrige langgeschwänzte *Diuris* [The white-leaved, long-tailed *Diuris*]

When Leichhardt reached the Moreton Bay district, he came in close contact with the local Aboriginal people and quickly realised their knowledge of the plants in their area was extensive. Each plant had its own Aboriginal name and Leichhardt adopted these names in place of his previous rather clumsy method of plant nomenclature. He started to put Aboriginal names on the plant labels and recorded the names in his diaries. One of Leichhardt's informants was a former escaped convict, John Sterry Baker, who had spent 14 years living with Aborigines to the west of Brisbane, but most of the words Leichhardt collected came from the Aborigines themselves. Leichhardt spent some months at the Archer brothers' property, Durundur, north of Brisbane, situated at the intersection of three language group boundaries. He was thus able to record words from three languages, Kabi, Wakka and Yagara, and usually recorded the name of his informant. He listed his informants and the language group to which each belonged, so it is usually possible to determine the language to which the word belongs. Three informants, in particular, Charley (Wakka), Paddy (Wakka) and Nikki (Kabi), provided the largest number of words. In some instances his plant labels have the name of the plant in each of the languages and the plant lists in his diaries also have more than one name. If the Aborigines had a particular use for the plant, Leichhardt recorded that as well. He also produced a trilingual dictionary. Most of his plants have been studied by botanists and identified with modern scientific names, so the Aboriginal names can be assigned scientific names. Current knowledge of the languages of southeast Queensland is meagre; Leichhardt's collections of words and meanings are probably the most extensive to survive, so his diaries and plants are an important source for research into Queensland Aboriginal languages.

Leichhardt never published on his botanical collections. His botanical contributions consist of a few comments in his paper on the geology of Australia and many observations in the published journal of his overland expedition. However, his collections have been used by other botanists such as Ferdinand von Mueller and George Bentham and continue to be used by botanists to this day.

The cultural significance of Leichhardt's botanical collections has yet to be assessed. Until the publication of the translation of his diaries, his contribution to our knowledge of Aboriginal languages had been completely overlooked. The botanical collections play an important role in this and have as yet not been studied with this mind. When they are, it will be found they are an important resource for Australian ethnobotany.

Notes

¹ Translated by Tom Darragh, and published as Thomas Darragh and Roderick J. Fensham, eds., *The Leichhardt Diaries: Early Travels in Australia during 1842-1844*. Brisbane: Queensland Museum, 2013.

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