

## John Dallachy (1804–71): collecting botanical specimens at Rockingham Bay

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**Warning.** Readers of this article are warned that it may contain terms, descriptions and opinions that are culturally sensitive and/or offensive to Aboriginal and Torres Strait Islanders.

John Dallachy (1804–71) was employed by Baron Ferdinand von Mueller to collect plants as a pioneer resident of Cardwell, Rockingham Bay, Queensland, 1864–71. Mueller's longest-serving paid botanical collector, Dallachy was also the most prolific collector of types among Mueller's large network of collectors. In part, Dallachy's success can be attributed to his collecting methods and intensive travels around the species-rich Rockingham Bay area. In part, also, Dallachy was indebted to fellow European pioneers for support (which was acknowledged in the eponymy of new taxa), and to local Indigenous and South Sea Islander people. Dallachy managed these relationships in a context of frontier war as local Indigenous people resisted being displaced by European colonists. Nevertheless, Dallachy's opportunity to work as a full-time professional botanical collector, and the rapidity with which his new specimens were identified and published was, to a large extent, due to Mueller. The partnership with Mueller led to Dallachy contributing ~3500 specimens from Rockingham Bay to the Melbourne Herbarium of which ~400 taxa were considered new to Western science.

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### Introduction

John Dallachy (1804–71) was the first European botanical collector to permanently reside in what is one of Australia's most floristically diverse areas, the Wet Tropics Bioregion of north-east Queensland, and it is therefore understandable that many new species would be described from the specimens that he collected. Between 1863 and 1871, he was employed by the Melbourne Botanic Garden as a botanical collector in Queensland,<sup>1</sup> under the direction of Baron Ferdinand von Mueller (1825–96), Victorian government botanist and director of the Melbourne Botanic Garden.<sup>2</sup> Previously, 1849–61, Dallachy had been superintendent and curator of the garden where plant collecting was also included in his duties. As presented in the introductory paper dealing with the biographical background of Dallachy, he left Melbourne under trying circumstances including family problems and alcoholism. His employment as a botanical collector at Rockingham Bay was an opportunity for him to solve or at least control some of these issues.

During Dallachy's time at Rockingham Bay, Mueller, the most significant taxonomist of his time in Australia, was at the height of his botanical productivity, largely driven by his collaboration with George Bentham (1800–84) on preparing *Flora Australiensis*, a definitive account of Australia's plants.<sup>3</sup> Mueller had established a

large network of collectors who provided him with a supply of specimens from which he described new taxa and then forwarded selected specimens to Bentham for citation in *Flora Australiensis*.<sup>4</sup>

In this second paper on the life and work of John Dallachy we examine the reasons for the successful collaboration between Dallachy and Mueller, including Dallachy's talent for noticing differences between plants, and for collecting specimens that exhibited the characters that define species.<sup>5</sup> We discuss Dallachy's interactions with local Indigenous clans that belonged to at least three language groups, the Dyirbal, Warungu and Warrgamay, and with native troopers, who were used by European settlers to enforce the dispossession of Indigenous people from the land.<sup>6</sup> We also identify the contributions of fellow European pioneer settlers to Dallachy's collecting, and who were acknowledged by Mueller in eponymy. Finally, we present and examine Dallachy's intensive and relentless itinerary which meant that few botanical novelties were overlooked by him during his time at Rockingham Bay.

### Rockingham Bay

The locality 'Rockingham Bay' includes two distinct geographical entities. First, the actual Rockingham Bay (Fig. 1), a curving sandy bay that was named by Lieutenant James Cook RN (1728–79) on 8

<sup>1</sup> Lavarack (2019). Dowe and Maroske (2020) see also this issue.

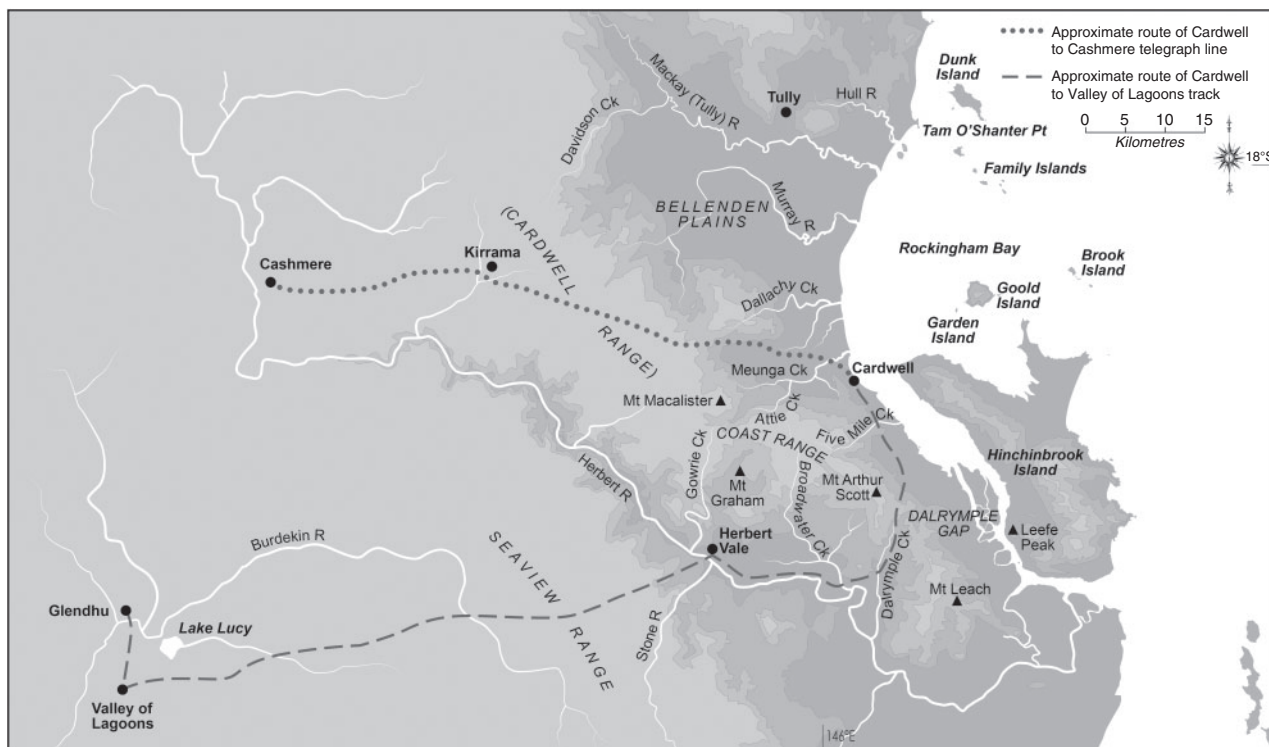
<sup>2</sup> Maiden (1908). Blake (1955). George (2009).

<sup>3</sup> Bentham (1863–78). Moore (1997).

<sup>4</sup> Maroske and Vaughan (2014).

<sup>5</sup> Primary online sources included the *Australian Plant Name Index* (APNI 2019), the *Australian Plant Census* (APC 2019), *JSTOR Global Plants* (JSTOR 2019), the *Australasian Virtual Herbarium* (AVH 2019), *Trove* (2019) and the *Biodiversity Heritage Library* (BHL 2019).

<sup>6</sup> Carron (1849). Dixon (1989). McDonald and Lane (2000).



**Fig. 1.** Map of Rockingham Bay area indicating the approximate route of Dalrymple's track to the Valley of Lagoons, botanical collecting locations mentioned by Dallachy and the approximate route of the Cardwell to Cashmere telegraph line. Prepared by Claire Burton, Cairns Regional Council.

June 1770 after Charles Watson-Wentworth, Second Marquis of Rockingham (1730–82), Prime Minister of Great Britain 1765–6. As Cook stated: 'From Cape Sandwich the land trends W. and afterwards N. forming a fine large bay, which I called Rockingham Bay, where there appears to be good shelter, and good anchorage, but I did not stay to examine it'.<sup>7</sup> The bay extends from the northern Hinchinbrook Channel (Oyster Point/Hecate Point) to Tully Heads, a distance of ~25 km. Second, the name was subsequently used by government officials, pastoralists and explorers in reference to a quasi-administrative area that covered most of the official District of Cardwell.<sup>8</sup> Centred on the township of Cardwell (Fig. 2), it included a large expanse of country to the south, west and north of Rockingham Bay proper, taking in the Seaview Range, Herbert River, Cardwell Range, Kirrama Range and Macalister Range to the south, west and north; inland to the Valley of Lagoons; north to Walter Hill Ranges; and the off-shore islands of Goold, Garden, Hinchinbrook, Family Group and Brook Islands, an area that covers ~5000 km<sup>2</sup>. From the south, Rockingham Bay is interrupted by Meunga Creek, which was known as Saltwater Creek in the lower

reach, Wreck Creek, Dallachy Creek, Murray River, which was formerly Macalister River, and Tully River which was formerly Mackay River. Although Dallachy frequently provided the location of his collections on his specimen labels, Mueller often cited his collections simply as 'Rockingham's Bay. J. Dallachy' or variations upon that. Preference is here given to location names used by Dallachy on his specimen labels, but in their absence Rockingham Bay is used as a general descriptor.

### Botanical collections

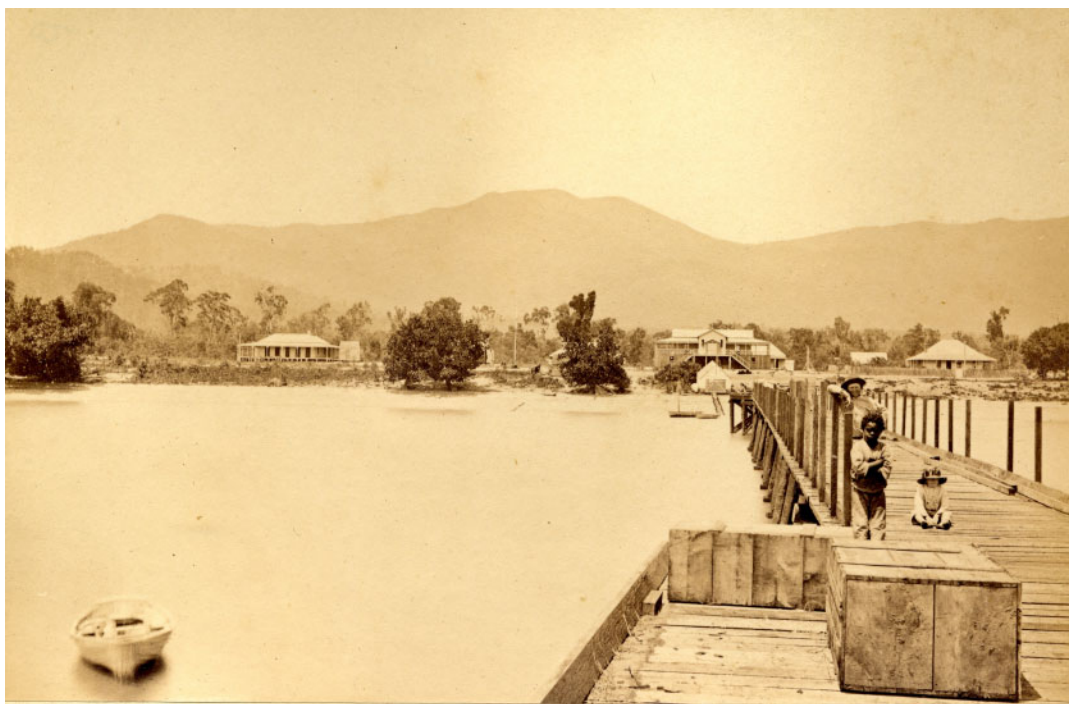
During 1863, Dallachy resided at Rockhampton and then Bowen, and collected ~500 and 400 specimens respectively in and around those locations.<sup>9</sup> In early 1864, he was among 20 European pioneers who settled at Rockingham Bay and he commenced plant collecting immediately upon his arrival. Dallachy's activities were described by fellow settler Arthur Scott, who noted that Dallachy 'discovered a great number of new plants already, of which he will forward specimens to Dr Muller, and among them are two new fruits'.<sup>10</sup>

<sup>7</sup> Hawksworth (1773).

<sup>8</sup> *Queensland Government Gazette* (1864). 'Description—Registration District of Cardwell. Commencing at Tam O'Shanter Point, and bounded on the north by the northern watersheds of the Mackay River and the Burdekin River; on the west by the western watershed of the Burdekin River; on the south by a line bearing north-east to Halifax Bay; and on the east by the sea coast to the point of commencement'.

<sup>9</sup> Dowe and Maroske (2020) see also this issue.

<sup>10</sup> Bowen (1865).



**Fig. 2.** Cardwell ~1870, photographer not known. With permission of the Cassowary Coast Regional Council Heritage Photo Collection.

Dallachy's first dated specimen from Rockingham Bay was of the wattle *Acacia oraria*, collected on 14 January 1864.<sup>11</sup> Although this species was not described by Mueller until some years later,<sup>12</sup> Mueller described many new Rockingham Bay species within only a few months of them being collected by Dallachy. For example, *Helicia scottiana* [= *Xylomelum scottianum*] was collected by Dallachy on 8 February 1864 and Mueller's description was published in May 1864.<sup>13</sup> This pattern of rapid description of new species is evident for many of the specimens from Rockingham Bay, and was undoubtedly driven by Mueller's decision to identify and name specimens before sending them to Kew where Bentham was working on *Flora Australiensis*.

Mueller may well have wanted his name on taxa for personal vanity, but other circumstances also led to the urgency in publication. In a letter to Bentham, Mueller wrote that he 'could not well trust the specimens away on a sea voyage before having worked them up',<sup>14</sup> which appears to be a response to the possible loss of specimens by shipwreck and also the irreparable damage to specimens caused by long distance travel. Mueller knew this well from

his own experience after the North Australian Expedition, 1855–6, when ~3000 of his specimens collected in the Victoria River/Sturt Creek area arrived in Sydney after many months delay on board *Messenger* and with most being destroyed by water damage in transit.<sup>15</sup> Earlier, in regards to the preparation of the flora of Victoria, Mueller wrote:

I shall have these orders worked up for the flora of Victoria previous to my sending them away [to Bentham at Kew], so that should unfortunately ever a consignment get wrecked, at least the benefit has been derived from them for the 'plants of Victoria'.<sup>16</sup>

By rapid publication, Mueller extracted as much of the scientific value as possible from the specimens in case of loss or damage.<sup>17</sup>

Nevertheless, this practice also resulted in later taxonomic complexity and occasional confusion regarding Mueller's use of multiple generic designations and excessive synonymisation. One example of Mueller's use of multiple possible genera for a single species entity was in his description of *Castanospora alphandii* first collected by Dallachy in 1864.<sup>18</sup> Mueller initially gave it the name *Ratonia alphandii*, and also included *Cupania alphandii*, also a new

<sup>11</sup> Isotype of *Acacia oraria* F. Muell., <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel2088044>, viewed August 2019. In an attached note Dallachy writes: 'Rockingham Bay January 14th 1864[.] A small tree have only seen one plant in flower no fruit—will get by and bye'.

<sup>12</sup> Mueller (1879).

<sup>13</sup> Mueller (1864a). Holotype of *Helicia scottiana* F. Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/10.5555/al.ap.specimen.mel1543806>, viewed September 2019.

<sup>14</sup> Letter: F. Mueller to G. Bentham, 24 June 1862 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>15</sup> Letter: F. Mueller to W. Hooker, 6 April 1857 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>16</sup> Letter: F. Mueller to G. Bentham, 26 August 1862 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>17</sup> Historically, large consignments of specimens have been lost in Australia, for example those of Robert Brown when the *Porpoise* and *Cato* sank off the coast of Queensland in 1803 and Ludwig Leichhardt abandoned an estimated 5000 specimens when his pack horses drowned in 1845.

<sup>18</sup> *Castanospora alphandii* (F. Muell.) F. Muell., MEL2250178.

name, as a proposed synonym.<sup>19</sup> Later, when establishing the genus *Castanospora* in 1875, and creating the new combination *Castanospora alphanthii*, Mueller provided yet another synonymous combination in *Glenniea alphanthii*.<sup>20</sup> Mueller's methodology of taxonomic productivity has often been criticized by other botanists.<sup>21</sup> With regard to the use of multiple generic names, an anonymous commentator wrote that Mueller:

needlessly added to the synonymy of Australian plants by simultaneously publishing many of them under two generic names, so that whichever view one might take of generic limits, his name would still stand as the authority.<sup>22</sup>

Bentham commented on some of Mueller's excessive taxonomy in saying that it 'has no other effect than the unnecessary addition of many hundred names to the already over-loaded synonymy'.<sup>23</sup>

Surviving documents suggest that Dallachy had only a limited input into the way Mueller dealt taxonomically or nomenclaturally with his specimens, although he did suggest identifications from time to time.<sup>24</sup> Table 1 lists the approximate numbers of specimens and type specimens collected per year by Dallachy and indicates that he became less prolific across his stay at Cardwell, but also that his overall totals for specimens and new taxa remained high. This was mainly attributable to the law of diminishing returns—as years went by fewer novelties were to be found. The specimens collected by Dallachy have been located in ~30 herbaria, both in Australia and internationally.<sup>25</sup> Herein, nomenclature and taxonomy follows the Australian Plant Census<sup>26</sup> and Australian Plant Name Index.<sup>27</sup> The names of new taxa described on specimens collected by Dallachy at Rockingham Bay are provided in Supplementary Material 1.

Dallachy was an observant and astute collector. He was cognizant of whether he had previously collected a species and duly recorded this on his field labels. He also returned to specific locations and individual plants to recollect in other seasons so that a complete series of vegetative, floristic and carpological samples could be acquired of a single species. By this collecting method, Mueller was able to 'build' the description of a species based on multiple specimens collected at different times. Taxonomically,

**Table 1. Approximate numbers of specimens and type specimens collected by John Dallachy at Rockingham Bay, 1864–71.**

year	# specimens	# types
1864	520	70
1865	550	70
1866	550	40
1867	500	50
1868	430	50
1869	425	30
1870	360	30
1871 (6 mths)	90	10
7.5 years	c. 3425	c. 350

this has created some problems with the typification of species names, as multiple specimens were usually involved in Mueller's original description. Current practice requires lectotypification of names when multiple specimens exist as is the case with many Mueller species names based on Dallachy specimens.<sup>28</sup>

Dallachy's field labelling was simple and often included the location, date and a brief description (Fig. 3). The precise dating of his specimens may have had an ulterior motive as he was paid by the day, and therefore this was as much a contractual record as it was the documentation of flowering/fruitlet times. The information that Dallachy included in his field labels did not constitute collector notes in the modern sense, but rather personalized notes about each specimen directed specifically to Mueller. Many field labels make reference to previously sent collections of the same species, noting when they were sent and of what organs they consisted. The field labels were probably never intended to be seen by anyone other than Mueller and they are evidence of an ongoing, although impersonal, dialogue between Dallachy and Mueller.

The most significant specimens collected by Dallachy at Rockingham Bay were of the tree and shrub floras. Collecting specimens of tall rainforest trees involves a greater degree of difficulty than for collecting small understory herbs, ferns and shrublets, especially as

<sup>19</sup> Mueller (1864b).

<sup>20</sup> Mueller (1875).

<sup>21</sup> Moore (1997).

<sup>22</sup> Anonymous (1896).

<sup>23</sup> Letter: G. Bentham to F. Mueller, 25 April 1883 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

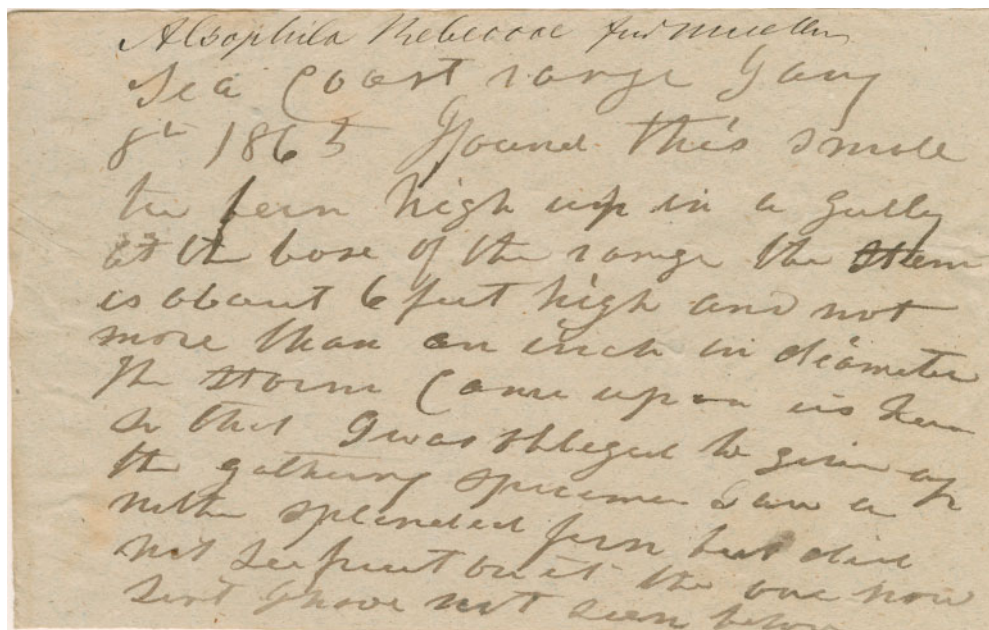
<sup>24</sup> Syntype of *Eugenia hemilampra* F. Muell., <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel60969>, viewed August 2019. Dallachy asks Mueller in attached note if this specimen is a *Eugenia*? Syntype of *Drosera adela* F. Muell., <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel95996>, viewed August 2019. In an attached note Dallachy writes: 'This *Drosera* grows on the side of Creek [...] at the base of the high Peak of the mountain[.] Dalyrmple Creek 13 June 1864 other specimen sent'.

<sup>25</sup> The herbaria that hold John Dallachy specimens include the Harvard University, Cambridge (A); State Herbarium of South Australia, Adelaide (AD); Dr. Henri van Heurck Museum, Antwerp (AWH); Botanischer Garten und Botanisches Museum Berlin-Dahlem (B); Natural History Museum, London (BM); Meise Botanic Garden (BR); Queensland Herbarium, Brisbane (BRI); Australian National Herbarium, Canberra (CANB); Australian Tropical Herbarium, Cairns (CNS); Department of Environment and Natural Resources, Darwin (DNA); Royal Botanic Garden Edinburgh (E); Natural History Museum, Florence (FI); Conservatoire et Jardin botaniques de la Ville de Genève (G); Harvard University, Cambridge (GH); Universität Göttingen (GOET); Martin-Luther-Universität, Halle (HAL); University of Hamburg (HGB); Royal Botanic Gardens, Kew (K); Naturalis, Leiden (L); Komarov Botanical Institute RAS, Saint Petersburg (LE); Botanische Staatssammlung München (M); Royal Botanic Gardens Victoria (MEL); University of Melbourne (MELU); Royal Botanic Gardens & Domain Trust, Sydney (NSW); New York Botanical Garden (NY); Muséum National d'Histoire Naturelle, Paris (P); Academy of Natural Sciences, Philadelphia (PH); Swedish Museum of Natural History, Stockholm (S); Trinity College, Dublin (TCD); Smithsonian Institution, Washington (US); Naturhistorische Museum Wien, Vienna (W); Yale University, New Haven (YU). Abbreviations are according to [Index Herbariorum](#) (2019).

<sup>26</sup> APC (2019).

<sup>27</sup> APNI (2019).

<sup>28</sup> McNeill and others (2012). McNeill (2014).



**Fig. 3.** John Dallachy's hand-written field label for *Alsophila rebecca* F. Muell. [= *Gymnosphaera rebecca* (F. Muell.) S. Y. Dong], collected 8 January 1865 at 'Sea Coast Range' (syntype, MEL1061212). Reproduced with permission from the Royal Botanic Gardens Victoria.

flowers and fruit may only be present high in the canopy. The Rockingham Bay area occupies the southern portion of the Wet Tropics Bioregion but many tree species, or the genera in which they are placed, have a broad distribution across much of the entire bioregion. Therefore the tree flora at Rockingham Bay, as collected by Dallachy, is mostly representative of the overall floristic diversity found in the bioregion. He was also active in collecting high-climbing vines that presented another set of difficulties, as flowers and fruit were most often present only in the high canopy.

One of Dallachy's more unusual collection methods was to shoot down specimens with a gun.<sup>29</sup> For example, when collecting *Ficus obliqua* on 2 November 1864 at Seaview Range he noted: 'I was obliged to shoot at this tree it being such a height a hundred [feet] and more high'.<sup>30</sup> When collecting *Weinmannia biagiana* [= *Karrabina biagiana*] on 3 December 1864 at Seaview Range: 'I had to fire 2 shots at it and this is all that I could obtain was not able to cut it down',<sup>31</sup> and for *Eugenia hemilampra* [= *Syzygium hemilamprum*], collected on 29 April 1871 at Cardwell: 'I went to shoot down a branch of the tree that I saw covered with white fruit'.<sup>32</sup> Apart from Dallachy's innovative use of firearms to assist with the collecting of high growing specimens, it can be assumed

that he also carried a firearm for personal protection and hunting. Guns were regarded as mandatory for settlers who held themselves in readiness against the attacks of Indigenous people, as well as for hunting native animals and birds to supplement their diets.<sup>33</sup>

To obtain specimens from tall rainforest trees meant that Dallachy occasionally resorted to felling trees, indicating that an axe was also a basic part of his equipment. For example, when collecting *Cupania diphyllostegia* [= *Diploglottis diphyllostegia*], 3 November 1865 at Rockingham Bay, he noted: 'This fine tree I have already sent flowering specimen I now send you seed of it I had to cut down the tree to get the seed'.<sup>34</sup> This is also an example of the manner in which he revisited individual species to gather additional organs. On occasions, he expressed regret in having had to cut down trees. When collecting *Polyosma alangiacea*, 27 July 1868 at Coast Range, he noted: 'I was very sorry when this tree was cut down and it not in flower it is hardly possible to see them whether the flowers are open or not in the dense scrub—many or one have I cut down in mistake I do not remember ever getting the tree before I am sorry that it was not in full flower'.<sup>35</sup> Dallachy also felled trees to obtain specimens of climbing plants. For example, when collecting *Berchemia ecorollata* [= *Ventilago ecorollata*], 10 August 1870

<sup>29</sup> Hudson (2000). Hubinger (2010).

<sup>30</sup> *Weinmannia biagiana* F. Muell., [= *Karrabina biagiana* (F. Muell.) Rosefelds & H. C. Hopkins], MEL0239375.

<sup>31</sup> Holotype of *Weinmannia biagiana* F. Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/10.5555/al.ap.specimen.mel104451>, viewed September 2019.

<sup>32</sup> Lectotype of *Eugenia hemilampra* F. Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel60969>, viewed September 2019.

<sup>33</sup> Davidson (1865–8). Birtles (1997).

<sup>34</sup> Syntype of *Cupania diphyllostegia*, <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel104161>, viewed September 2019.

<sup>35</sup> Syntype of *Polyosma alangiacea* F. Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel568240>, viewed September 2019.

at Rockingham Bay, he noted: 'this is a splendid climber the foliage is a light shining green loaded with small yellow flowers the tree that supported it was about 30 feet high it was at the top of it I had to cut it down'.<sup>36</sup>

For securing some specimens, Dallachy engaged the assistance of other, often unnamed labourers especially when large or tall trees were involved. For example, when he collected the rainforest quandong *Elaeocarpus angustifolius* on 14 July 1864 at Seaview Range, he noted 'I had to cut down a large tree to get the fruit one of Mr Dalrymple's men did it for me'.<sup>37</sup> George Dalrymple, leader of the Rockingham Bay settlement party, employed men for his pastoral interests at the Valley of Lagoons. For the similarly tall *Cinnamomum laubatii*, collected 5 June 1865 at Seaview Range, Dallachy noted: 'A very large tree that the workmen cut down'.<sup>38</sup>

In some cases assistance was provided by Aboriginal troopers in the native police. For *Eugenia cryptophlebia* [= *Syzygium cryptophlebium*], collected 7 April 1868 at Coast Range: 'tree is about 50 feet high one of the troopers went up and cut some branches off'.<sup>39</sup> Similarly for *Carnarvon araliifolia*, collected 10 April 1869 at Mount Macalister, when he noted on his collection label that 'the tree was about 30 feet high, it is not so high now for the trooper cut off about 10 feet from the top to get the flower'.<sup>40</sup> Troopers in the native police were Indigenous men under the charge of white officers. The troopers were usually not local Indigenous men but were recruited from other parts of the colony primarily to reduce the possibility that they would be sympathetic to local Indigenous people. The officers wanted to be confident that their troopers would follow orders, exact violent retribution for alleged offences against European settlers and not show any clan sympathies.<sup>41</sup>

Thus, Dallachy was not always the actual collector of a specimen. On several occasions he noted that specimens were brought to him: for example, for *Acronychia acronychioides*, labelled as 8 May 1866 from Burdekin River, he recorded that 'Murray brought this from near the Burdekin River',<sup>42</sup> this being Inspector John Murray of the native police who was stationed in Cardwell 1865–70 (see below); and for *Flindersia bourjotiana*, collected 24 July 1870 from

the Cardwell to Cashmere telegraph line then being constructed, he noted: 'one of the men brought this specimen down the ranges for me'.<sup>43</sup> The telegraph line was being constructed between Cardwell and Cashmere via Kirrima Range at this time (see Fig. 1). On 29 April 1871, Dallachy noted that 'Mr Whitfield went with me' to collect a specimen of *Eugenia hemilampra* [= *Syzygium hemilamprum*], at Cardwell. This was most likely Edwin Whitfield,<sup>44</sup> a storekeeper and commission merchant in Cardwell, and for whom Whitfield Range near Cairns was later named by George Dalrymple.<sup>45</sup>

Reports from third parties provide some information about Dallachy's travelling companions. James Morrill, in his diary that covered 13 January to 18 March 1864, wrote that he (that is Morrill), with Dallachy, Dalrymple, Arthur Scott and William Tully, explored the immediate hinterland of Rockingham Bay together. In the transcribed diaries of John Ewen Davidson,<sup>46</sup> a planter who established a sugarcane plantation near Murray River, it was noted that he (that is Davidson), Dallachy, a boatman and five troopers, travelled to Mackay River (= Tully River) in March 1866.<sup>47</sup> There they were joined by Police Magistrate Roger Beckwith Leefe,<sup>48</sup> Inspector Reginald Charles Heber Uhr<sup>49</sup> of the native police and two Aboriginal troopers, and they proceeded to explore the area. Dallachy made other excursions with Davidson in November and December 1866 in the vicinity of Davidson's plantation. On the latter of these, they were joined by T. H. Fitzgerald, an associate of Davidson, and Charles Collins, pastoralist from the Lynd River Station.<sup>50</sup>

While Dallachy occasionally noted the names of European helpers in collecting, only one reference has been found to an Indigenous collector. On 18 September 1866 at Herbert River, Dallachy noted that 'Mr Murray [Inspector John Murray of the native police] sent a black trooper Willy who went up the tree and cut off a branch', to collect a specimen of *Dysoxylum mollissimum*.<sup>51</sup> No further information has been found about 'Willy', but he is one of only a handful of named Indigenous collectors of specimens lodged in Australian herbaria.<sup>52</sup>

<sup>36</sup> *Berchemia ecorollata* F.Muell. [= *Ventilago ecorollata* (F.Muell.) F.Muell.], MEL1008558.

<sup>37</sup> *Elaeocarpus angustifolius* Blume, MEL2225689.

<sup>38</sup> Syntype of *Cinnamomum laubatii* F.Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel80321>, viewed September 2019.

<sup>39</sup> Holotype of *Eugenia cryptophlebia* F.Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel60112>, viewed September 2019.

<sup>40</sup> *Carnarvon araliifolia* F.Muell., MEL2170162.

<sup>41</sup> Richards (2008).

<sup>42</sup> *Acronychia acronychioides* (F.Muell.) T.G.Hartley, MEL0047955.

<sup>43</sup> Syntype of *Flindersia bourjotiana* F.Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel31704>, viewed September 2019.

<sup>44</sup> Edwin Whitfield arrived in Cardwell as a 'New Chum', a term used to describe the sons of wealthy English families who took up colonial experience with Scott Brothers & Co., with each 'to invest not less than £2000 in cattle', which were run on the Scott Brothers properties. This was considered a form of non-refundable investment in development of the properties and a means to afford 'them of learning the management of cattle, sheep and horses and all other business connected with pastoral pursuits'. [Walter Jervoise Scott (1835–90) Papers, as filmed by the Australian Joint Copying Project and held at the National Library of Australia].

<sup>45</sup> Dalrymple (1874).

<sup>46</sup> Commemorated in the genus *Davidsonia* F.Muell. (Davidson's plum).

<sup>47</sup> Davidson (1865–8).

<sup>48</sup> Commemorated in the species *Litsea leefeana* (F.Muell.) Merr.

<sup>49</sup> Commemorated in the species *Melodorum uhrrii* F.Muell.

<sup>50</sup> Davidson (1865–8).

<sup>51</sup> *Dysoxylum mollissimum* Blume, MEL0118543.

<sup>52</sup> Maroske (2014) pp. 74–75.

Some authors have suggested that Dallachy regularly travelled alone and was not harassed by the Indigenous people.<sup>53</sup> One author speculated that Dallachy was considered by the Indigenous people to be in a 'delirium' because of his habit of shooting down specimens with his gun and that he was 'possessed by a devil, and mad'.<sup>54</sup> He was therefore to be left alone because of the supposed belief, at least as interpreted by that author, that 'if any person injured or killed them [that is, a possessed person] that the demon would enter the person who killed or injured the mad person'.<sup>55</sup> The evidence we have found, however, suggests that Dallachy rarely, if ever, travelled alone away from the immediate environs of Cardwell or other settlements and was often accompanied by members of the native police, by fellow Cardwellians or groups of workers and pastoralists.

Dallachy occasionally included biocultural information on his collection labels as he had an interest in plant use and edibility no doubt derived from his education and work as a gardener.<sup>56</sup> For example, he noted on his label for the Candle-nut tree, *Aleurites rockinghamensis*, collected 22 November 1864 at Herbert River: 'It grows very common on the ranges and Herbert river fruit not bad to eat';<sup>57</sup> for *Syzygium wilsonii*, collected 8 June 1865 at Sea Coast Range (= Seaview Range), he noted: 'beautiful *Eugenia* the fruit is pure white about the size of a small French bean and very good to eat';<sup>58</sup> and for *Aidia racemosa*, collected 30 September 1865 at Meunga Creek, he noted: 'the fruit is very good I eat some of them today'.<sup>59</sup>

In these instances his conclusions seem to have been led by his own experimentation, but Dallachy also noted the uses of some plants by Indigenous people by direct observation. For *Curculigo ensifolia*, collected 26 November 1865 at Rockingham Bay, he noted: 'The natives eat the roots of this plant';<sup>60</sup> for *Beilschmiedia bancroftii*, collected 8 January 1868 at Mackay and Murray Rivers, he noted: 'Found in native camps on the 7 and 8 of January 1868 on the Mackay and Murray rivers the natives seem to be fond of this nut';<sup>61</sup> for *Hornstedtia scottiana*, collected 5 December 1867 at Herbert River, he noted: 'when the fruit is ripe has the smell [of

Pine apple the whites and blacks seem to take to eat it I liked it myself'.<sup>62</sup>

Dallachy also recorded at least one observation gleaned from contact with South Sea Islanders at Cardwell. These people, who began arriving at Rockingham Bay in 1866, were indentured labourers who were 'blackbirded' or kidnapped from the South Seas Islands to work on sugar plantations for low or no pay.<sup>63</sup> On a specimen of *Ficus copiosa*, collected 19 October 1868 at Murray River, Dallachy noted: 'The South Sea Islanders eat the leaves of this *Ficus*'.<sup>64</sup> It is not clear from his notes whether Dallachy obtained the edibility information directly from local Indigenous people or fellow settlers, or even from personal experimentation.

Dallachy's notes also recorded the possibility of the adaptability of some local species for horticulture and agriculture. Numerous notes on his specimens include words such as 'pretty' and 'handsome',<sup>65</sup> and for orchids such as *Bulbophyllum exiguum* var. *dallachyi*, suggesting: 'it would look beautiful were it all in flower at same time'.<sup>66</sup> Dallachy collected the finger cherry, *Rhodomyrtus macrocarpa* on 5 October 1866 at Herbert River, and noted that the 'fruit eats very well red inside if cultivated I believe that it would much improve both in size and flavour'.<sup>67</sup> The fruit of *R. macrocarpa* is now considered poisonous and should not be consumed as it is a possible cause of blindness.<sup>68</sup> The toxicity is related to one or more of a series of highly substituted dibenzofurans, known as rhodomyrtosins.<sup>69</sup>

### Interaction with Indigenous peoples

Even before Dallachy went to Cardwell, Mueller was aware that he was sending his collector into a dangerous situation. In a letter to Euphemia Henderson on 19 September 1863, Mueller wrote that Dallachy had 'started for the high mountains in N. E. Australia and may, if not encountering the natives, reveal much of interest. He is out with an armed party'.<sup>70</sup>

This was around the time Dallachy and Eugene Fitzalan ascended Mount Elliott, when Dallachy was residing in Bowen

<sup>53</sup> Lavarack (2019).

<sup>54</sup> Johnstone (1904).

<sup>55</sup> Hubinger (2010).

<sup>56</sup> Davison (2019).

<sup>57</sup> *Aleurites rockinghamensis* (Baill.) P.I.Forst., MEL0232494.

<sup>58</sup> Syntype of *Eugenia wilsonii* F.Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel67242>, viewed September 2019.

<sup>59</sup> *Aidia racemosa* (Cav.) Tirveng., MEL2266465.

<sup>60</sup> *Curculigo ensifolia* R.Br., MEL0107499.

<sup>61</sup> *Beilschmiedia bancroftii* (F.M.Bailey) C.T.White, MEL0582454.

<sup>62</sup> Syntype of *Elettaria scottiana* F.Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel92982>, viewed September 2019.

<sup>63</sup> Anonymous (1866a). Jones (1961).

<sup>64</sup> *Ficus copiosa* Steud., MEL1063144.

<sup>65</sup> Syntype of *Antidesma sinuatum* Benth., 'handsome small tree', <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel515943>, viewed September 2019. Isotype of *Bulbophyllum exiguum* var. *dallachyi* Benth., <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel1540836>, viewed September 2019.

<sup>66</sup> *Bulbophyllum exiguum* var. *dallachyi* Benth. [= *Bulbophyllum newportii* (F.M.Bailey) Rolfe], MEL1540836.

<sup>67</sup> *Rhodomyrtus macrocarpa* Benth., MEL2194095.

<sup>68</sup> Covacevich and others (1987).

<sup>69</sup> Everist (1981). Wagstaff (2008).

<sup>70</sup> Letter: F. Mueller to E. Henderson, 19 September 1863 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

before his move to Rockingham Bay. The month after Dallachy arrived at Cardwell, Mueller returned to the theme of conflicts between Indigenous people and Europeans in a letter to William Hooker at Kew:

Mr Dallachy is likely now collecting in the higher ranges & deep jungle ravines in the northern part of Queensland, as far as it can be done, whilst hordes of furious & merciless savages beset every travellers path ... friends of mine, settled in the vicinity of Rockingham Bay have taken Mr Dallachy under their protection, he can occasionally accompany armed parties into the ranges & I hope thus to obtain interesting material.<sup>71</sup>

The violence characterising the relationship between Europeans and Indigenous people in Queensland was well established by the time Dallachy arrived, and played out in a similar fashion at Rockingham Bay after the arrival of Dalrymple's party in January 1864.

The Rockingham Bay area was occupied by a significant number of Indigenous clans that belonged to at least three language groups, the Dyirbal, Warungu and Warrgamay.<sup>72</sup> To facilitate communication with these clans, Dalrymple included in his expedition James Morrill (sometimes Murrells), an Englishman who was ship-wrecked in 1846 and then spent the next 17 years living with Indigenous groups in the Cleveland Bay/Mount Elliott area. He returned to European society in 1863.<sup>73</sup> Dalrymple wrote that he acquired the services of Morrill 'for the purpose of, if possible, coming to an amicable understanding with these people, having always been of opinion that hostility and bloodshed frequently occur between the wild blacks and white settlers at the outset of their intercourse'.<sup>74</sup> Also in the pioneer party were Lieutenant Marlow and three Aboriginal troopers of the Queensland Native Police who were expected to enforce the colonial laws and protect the settlers from possible attacks and harm.

According to Morrill's own account, the expeditioners were approached by a group of Indigenous people at Rockingham Bay on 24 January, who asked if the Europeans had come for a corroboree or to make war. Morrill told them that the expeditioners 'came as friends', but immediately followed up with a warning 'they [the Indigenous people] must clear out and tell others to do so, as we wished to occupy the land, and would shoot any who approached'. On 24 January, a group of expeditioners was surprised by an armed party of Indigenous people, and Morrill reported with chilling understatement: 'they were set upon suddenly by Mr. Dalrymple's men and rather cut up'.<sup>75</sup>

Thus, within days of arriving at Rockingham Bay, the expeditioners made it clear to the Indigenous people that they were to be turned off their land with whatever force was deemed necessary. The term 'frontier wars' has been applied by a number of historians to the violent conflicts between Indigenous people and European settlers during the British colonisation of Australia.<sup>76</sup> These conflicts were particularly deadly in Queensland, and Raymond Evans and Robert Ørsted-Jensen calculate that European settlers and the Queensland native police were responsible for tens of thousands of fatalities among the colony's Indigenous peoples.<sup>77</sup>

Dalrymple's primary focus was to forge a road from Rockingham Bay across the ranges to the Valley of Lagoons as a means to allow the transport of his pastoral products to markets. In planning the best route, he questioned the local Indigenous people: 'I asked them where the easiest track existed through the ranges, as I wished to go over to the great river, *Maal Maal*, or Burdekin (pointing in that direction), but they stated with much animation that there was no way through the ranges, and that they went far away, pointing to the north-west, and there crossed'.<sup>78</sup> Dalrymple was suspicious of their intentions and noted that he 'felt perfectly certain that these cunning savages were answering every question by a falsehood for their own purposes'.<sup>79</sup> Protection of the settlement and the pioneers from attack was a major imperative, and it was noted by Arthur Scott that 'it would be the height of imprudence to let them into settlement for some time'.<sup>80</sup>

The first reported murder of a European settler by an Indigenous person in the Rockingham Bay area occurred at the Valley of Lagoons in January 1865 when a shepherd (named as Jacob Drün) employed by the Scott Brothers was speared.<sup>81</sup> In the Rockingham Bay area, there were retaliatory episodes against the Indigenous people for such murders, robbery and cattle killing.<sup>82</sup> Davidson, the planter whom Dallachy accompanied on several excursions (see above), noted in his diary for 7 January 1866 that he went 'with police to avenge attack by blacks. Some pursued and shot down. It was a strange and painful sight to see a human being running for his life and see the black police galloping after him and hear the crack of the carbines ... of course, I took no part in these proceedings, this being the duty of the police ... it is the only way of ensuring the lives of white men'.<sup>83</sup>

The methods of retribution, predominantly carried out by the native police, were often brutal and disproportionate to the supposed 'crime' and included both random and planned attacks, murders of innocent men, women and children,<sup>84</sup> and eventual

<sup>71</sup> Letter: F. Mueller to W. Hooker, 24 February 1864 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>72</sup> Carron (1849). Dixon (1989). McDonald and Lane (2000).

<sup>73</sup> Gregory (1896).

<sup>74</sup> Bowen (1865).

<sup>75</sup> Morrill (1864).

<sup>76</sup> Reynolds (1982). Reynolds (2013). Evans (2011).

<sup>77</sup> Evans and Ørsted-Jensen (2014) claim that Indigenous fatalities numbered no less than 65,180.

<sup>78</sup> Bowen (1865).

<sup>79</sup> Bowen (1865).

<sup>80</sup> Bowen (1865).

<sup>81</sup> Anonymous (1865a).

<sup>82</sup> Anonymous (1865b).

<sup>83</sup> Davidson (1865–8). Wood (1965).

<sup>84</sup> Anonymous (1866b).

removal from their country.<sup>85</sup> The ‘effectiveness’ of the native police was a matter of some civic pride when the Indigenous people ‘become bolder and bolder’.<sup>86</sup> Settlers in Cardwell were mostly supportive of the native police and their methods in dealing with the Indigenous peoples.<sup>87</sup> It was noted by a resident that ‘we entertain no fear on account of the Cardwellites as long as Mr. John Murray and his troopers are within hail’.<sup>88</sup> Dallachy’s surviving manuscripts do not mention any of these conflicts, with little information surviving on how he interacted with Indigenous people (but see above for assistance in collecting and biocultural knowledge).

Dallachy and Mueller both operated on the assumption that they had a right to collect botanical specimens whenever and wherever they wished, without any consideration that entering a locality could be seen as trespass by Indigenous people, or the removal of specimens be seen as theft. They also showed little regard for the names that Indigenous people had for plants, and only occasionally collected information on Indigenous uses for plants. Mueller held a common view among Europeans that Indigenous people would inevitably disappear as part of the progress of European settlement,<sup>89</sup> although he strongly disapproved of settler reprisals against people he regarded as fellow British subjects. In the final decade of his life, he also supported leaving the highlands of Queensland in the ownership of Indigenous people thereby protecting their future and that of ‘several of the most wonderful most splendid landscapes of the world’.<sup>90</sup>

Dallachy undoubtedly knew about the conflicts happening around him, and on at least one occasion his family was personally involved. In 1867, Dallachy’s daughter Mary was wounded by an Aboriginal spear when on an excursion to Garden Island. According to the *Empire* newspaper the picnickers ‘were rushed by a mob of blackfellows ... three of their spears took effect, two of them wounding two of the men slightly, and one of them Miss Dallachy rather severely’.<sup>91</sup> Swift retaliation from the Aboriginal police troopers, as well as armed vigilante settlers, was the usual response for incidents attributed to the Indigenous people. In response to the Garden Island incident, several Indigenous camps on nearby Gool Island were reportedly destroyed and their canoesquisitioned.<sup>92</sup>

Despite the trend of violence and abuse toward the Indigenous people, some early attempts at ‘integration’ were made by the Scott brothers at the Valley of Lagoons. However, for the most part, their attempts were underpinned with colonial condescension and with

the ultimate object of acquiring cheap labour. In 1866, Arthur Scott, in a letter to Walter Scott wrote:

I am rather sorry about those blacks; I think the time has now come to try and be friendly with them, we are strong enough now to defend ourselves and they would do a lot of work in washing [that is washing sheep in preparation for shearing]. After all they had one dressing from Lee and I think that ought to have been enough. Certainly the best way will be to bring in some gins and boys and we shall soon make the others understand what we want. I am convinced that with our scrub and lava it is far more dangerous to keep them out than to let them in.<sup>93</sup>

### Native paths

During early settlement in many parts of Australia, the use of established native tracks to facilitate exploration, transport and communications was a common practice.<sup>94</sup> Dalrymple, when seeking a track to the Valley of Lagoons in March 1864, noted that ‘a black’s track or path led us right into the gap, crossing many swamps behind the mangroves’.<sup>95</sup> The gap lay between Mount Leach and Mount Arthur Scott, some 20 km to the south-west of Cardwell, and became known as Dalrymple Gap.<sup>96</sup> It is most probable that the use of Aboriginal tracks was to facilitate much of the early exploration through densely forested areas at Rockingham Bay. It has been reported that Edmund Kennedy, in 1848, used an Aboriginal track to find a way around the swamps that were blocking his progress when commencing his ill-fated expedition from Rockingham Bay to Cape York.<sup>97</sup> In a report from pastoralist Charles Collins of Lynd River in April 1866, he described how he established a track going west of Cardwell into the upper Herbert River, using a different route than Dalrymple had established to reach the Valley of Lagoons that avoided the steep and rugged Seaview Range.<sup>98</sup> Collins noted that the route chosen was ‘a black’s track, evidently much used, which we followed, took us along a leading spur for about five miles, when we found ourselves over the range’.<sup>99</sup> This particular track went to Leichhardt Creek and Collins estimated that the distance from there to Cardwell was ~145 km. Apart from several incidental notes on his specimen labels related to plants utilized by the Indigenous people (see above), there is no record that Dallachy made use of any Aboriginal tracks or how he interacted with them in his role as a botanical collector except in their occasional assistance in the collection of some specimens.

<sup>85</sup> Ryan and others (2017).

<sup>86</sup> Anonymous (1870a). A Rambler (1872).

<sup>87</sup> Bottoms (2013).

<sup>88</sup> Anonymous (1867a).

<sup>89</sup> Home and others (2002) pp. 31–32.

<sup>90</sup> Letter: F. Mueller to H. Herlitz, 9 April 1890 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>91</sup> Anonymous (1867b).

<sup>92</sup> Davidson (1865–8). Wood (1965).

<sup>93</sup> Letter: A. Scott to W. Scott, 21 March 1866 [Walter Jervoise Scott (1835–1890) Papers, as filmed by the Australian Joint Copying Project and held at the National Library of Australia].

<sup>94</sup> Farnfield (1968). Ferrier (2015).

<sup>95</sup> Bowen (1865).

<sup>96</sup> The Dalrymple Gap track has been preserved as a tourist activity.

<sup>97</sup> Hubinger (2010).

<sup>98</sup> Anonymous (1864a).

<sup>99</sup> Collins (1866).

### Personal eponymy based on collections made by John Dallachy

Of the ~400 new taxa described by Mueller on specimens collected by Dallachy at Rockingham Bay, ~90 were named to commemorate persons for their contribution to society in several fields of endeavour. Of these, ten taxa were named for twelve Europeans directly associated with Rockingham Bay and Cardwell,<sup>100</sup> mostly including residents and officers stationed there. It is possible that no other settler community in Australia had so many relatively ordinary but ruthless individuals commemorated in plant names. Most were men who were among the first or earliest Europeans at Cardwell, and were either directly involved in dispossessing Indigenous peoples, or directly benefitted from that dispossession.

Mueller had a well-established protocol when it came to eponymous application of new plant names. He was adept at networking, patronage and reciprocity and the naming of plants after people was an integral part of his manner of working and a personal characteristic of his plant name etymology. Of the ~2550 plant taxa named by Mueller during his career, ~680 (28%) are eponyms acknowledging persons as a form of encouragement and reward for their support, for their contribution to the advancement of society, or for garnering favour because of their influence or positions of authority.<sup>101</sup> Mueller wrote that eponymous recognition in plant names was 'a monument less perishable than any of marble or bronze'.<sup>102</sup>

At least four men involved with the establishment of Cardwell were commemorated in plant names by Mueller (apart from Dallachy). These included the expedition leader George Dalrymple (Fig. 4),<sup>103</sup> for whom Mueller named *Vitex dalrympleana* [= *Gmelina dalrympleana*] for having 'rendered most important services, involving considerable expense, to Mr Dallachy in his capacity as collector of the botanic garden in the unsettled districts of Queensland'.<sup>104</sup>

Other prominent early settlers were the Scott brothers,<sup>105</sup> George Arthur Jervoise Scott (Fig. 5),<sup>106</sup> commemorated in *Helicia scottiana* [= *Xylomelum scottianum*], and Walter Jervoise Scott (Fig. 6)<sup>107</sup> and Charles James Scott who,<sup>108</sup> along with Arthur, were commemorated jointly in *Elettaria scottiana* [= *Hornstedtia scottiana*]. The Scott brothers established the Valley of Lagoons pastoral property with Dalrymple and Queensland Premier Robert Herbert,



Fig. 4. George Elphinstone Dalrymple, 1874. Courtesy of the State Library of Queensland, neg. no. 168081.

but all eventually lost money in the venture. Mueller's dedications emphasized the support these men gave to Dallachy. Mueller also named *Cardwellia*, after the First Viscount Cardwell (Fig. 7),<sup>109</sup> who was secretary of state for the colonies in the United Kingdom, 1864–6, and after whom the township of Cardwell had been named. In a letter to Cardwell, Mueller wrote that he named it in 'homage to you as the Chief Minister for the Colonies [and] I solicit your permission to distinguish in the closing pages of the fourth volume of my *Fragmenta Phytographiae Australiae* one of the noble trees of North East Australia with your elevated name'.

The names of four later European settlers at Cardwell were also eponymized by Mueller. John Ewen Davidson was commemorated

<sup>100</sup> Eight taxa were named for single individuals and two taxa were named for multiple individuals.

<sup>101</sup> Gillbank (1996). Darragh (1996). Maroske and Vaughan (2014). Dowe and Maroske (2016). Dowe (2017).

<sup>102</sup> Letter: F. Mueller to G. Bentham, 24 February 1865 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>103</sup> George Augustus Frederick Elphinstone Dalrymple (b. 1826, Scotland; d. 1876, St Leonards, England) was an explorer, politician, public servant, businessman, pastoralist and founder of Cardwell. He never married. Farnfield (1968). Austin and Lack (2019).

<sup>104</sup> Letter: F. Mueller to J. McCulloch, 27 January 1864 (Correspondence of Ferdinand von Mueller, Royal Botanic Gardens Victoria).

<sup>105</sup> Three sons (of eight children) of James Winter Scott (1799–1873) of Rotherfield Park, Hampshire, England.

<sup>106</sup> (George) Arthur Jervoise Scott (b. 1833, Hampshire, England; d. 1895, at sea near Aden whilst en route to Cardwell) was an explorer, pioneering pastoralist and businessman at the Valley of Lagoons and Cardwell. He arrived in Queensland in 1863, in the company of his younger brother Walter Jervoise Scott, to assist in the establishment of the Valley of Lagoons pastoral property in partnership with George Dalrymple and Robert Herbert. Arthur returned to England in late 1864 to organize finances. He made a brief visit to Cardwell in 1870 and then returned to live permanently to England. Jones (1961). Pedley (2014).

<sup>107</sup> Walter Jervoise Scott (b. 1835, Hampshire, England; d. 1890, Valley of Lagoons, Queensland) was a pioneering pastoralist and businessman, arriving in Queensland in 1863 to establish the Valley of Lagoons pastoral property, and spending, apart from a visit to England in 1888, the rest of his life there. He never married. Pedley (2014). Bolton (2019).

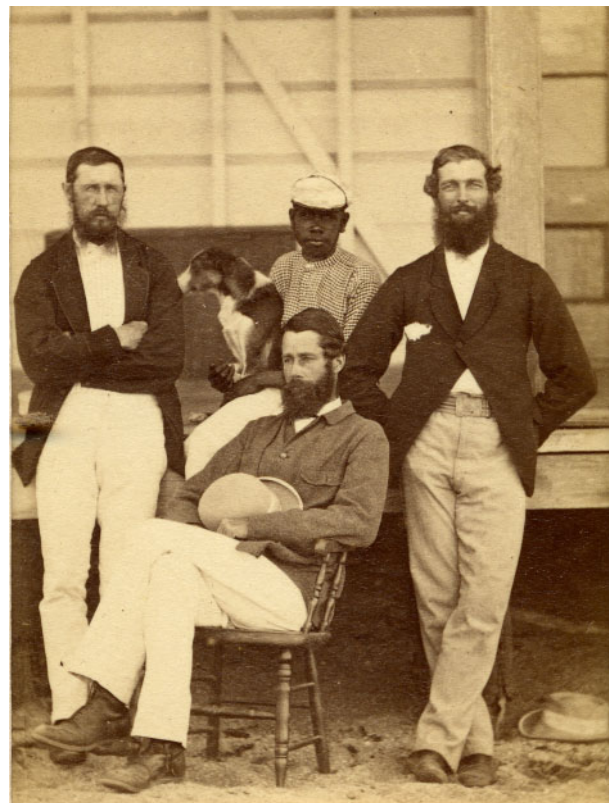
<sup>108</sup> Charles James Scott (b. 1837, Hampshire, England; d. 1899, East Tisted, England) resided in Cardwell and the Valley of Lagoons 1864–7, and was primarily involved in financing and promotion of the Scott brother's pastoral interests. He was a member of the provincial council of Cardwell but returned to England in 1867 to become a clergyman in Forres, Scotland. In 1874 he married Ruth Caldwell, daughter of Robert Caldwell, but they had no children. Pedley (2014).

<sup>109</sup> Edward Cardwell, First Viscount Cardwell (granted 1874), (b. 1813, Eccles, England; d. 1886, Torquay, England) was a lawyer, conservative politician and Secretary of State for the Colonies 1864–6. In 1838 he married Annie Parker daughter of Charles Stuart Parker; they had no children and his title became extinct. Quattrocchi (1999). Pedley (2014). Bell (2019).



**Fig. 5.** (George) Arthur Jervoise Scott, n.d. Courtesy of the State Library of Queensland, image 42525.

in the genus *Davidsonia* (commonly referred to as Davidson's plum) (Fig. 8),<sup>110</sup> in honour of his work in establishing sugar plantations in the area. The name has been incorrectly attributed by some authors to the surveyor Alexander Davidson.<sup>111</sup> Either John McBryde senior or his son John McBryde junior is commemorated in the rainforest tree *Sloanea macbrydei* for assisting Dallachy over several years. McBryde senior was a butcher and custom's valuator at Cardwell,<sup>112</sup> and McBryde junior was a storekeeper and served on the first provincial council of Cardwell.<sup>113</sup> Roger Beckwith Leefe was commemorated in *Cylicodaphne leefeana* [= *Litsea leefeana*] for 'generous assistance' to phytological investigations in the Kennedy district.<sup>114</sup> Leefe was appointed Police Magistrate, Harbour Master and Postmaster at Cardwell on 8 April 1864.<sup>115</sup> Another early settler, Page Kennedy,



**Fig. 6.** Walter Jervoise Scott (seated), Henry Stone (left), Alick (centre), Edwin Whitfield (right), n.d. With permission of the Cassowary Coast Regional Council Heritage Photo Collection.

thought to be a drover,<sup>116</sup> was commemorated in *Meniscium kennedyi* [= *Pronephrium asperum*], but there are no personal details known about him.<sup>117</sup>

Mueller commemorated the names of two police officers in charge of native troopers at Cardwell for the 'active assistance' and 'protection' they gave to Dallachy and to another botanist, Walter Hill, who visited the infant settlement in 1865.<sup>118</sup> Inspector John Murray was stationed at Cardwell (Fig. 9), 1865–70 (including the period when Dallachy's daughter Mary was attacked on Garden

<sup>110</sup> John Ewen Davidson (b. 1841, London, England; d. 1923, Oxford, England) was a businessman, entrepreneur, ethnographic collector, sugar planter and miller. He married Amy Constance Ashdown in 1878 at Darlinghurst, Sydney and they had two sons and four daughters. Davidson (1865–8). Anonymous (1923). Jones (1961). Wood (1965). Harden and Williams (2000). Hubinger (2010). Barnard (2019). Mills (2019).

<sup>111</sup> George (2009).

<sup>112</sup> Queensland Government Gazette (1867).

<sup>113</sup> Hubinger (2010).

<sup>114</sup> Roger Beckwith (also Beckworth) Leefe (b. 1834, Richmond, Yorkshire, England; d. 1908, Nukualofa, Tonga) was the son of Octavius Leefe, alderman and magistrate, and Mary Leefe (née Wright). He arrived in Queensland on 18 October 1863, and was employed in the customs service at Rockhampton. On 8 April 1864, he was appointed as Police Magistrate, Harbour Master and Postmaster at Cardwell. Formerly a retired Lieutenant of the Indian Navy, he arrived in Cardwell July 1864 on the *HMSS Salamander* and retired due to ill health 2 November 1866. He left Cardwell in 1872 to settle in Fiji, where he developed plantations and was involved in local administration as a warden for the Ra Province and as a member of the Legislative Council of Fiji. He was appointed Acting Vice Consul at Tonga 1887–8, and then a deputy commissioner and Vice Consul in Fiji. Kuhlken (1994). Pedley (2014).

<sup>115</sup> Anonymous (1864b).

<sup>116</sup> George (2009).

<sup>117</sup> Page Kennedy was the co-collector of the type species and was cited by Mueller as 'J. Dallachy & Page Kennedy'. Dallachy's original field label has not been located for that specimen and any direct reference to him is therefore not available.

<sup>118</sup> Hill (1865).



**Fig. 7.** Edward Cardwell (from 1874, 1st Viscount Cardwell), carte-de-visite by Samuel A. Walker, 1862–6. Courtesy of the National Portrait Gallery, London.



**Fig. 8.** John Ewen Davidson, n.d. Courtesy of the State Library of Queensland, neg. no. 11080.

Island) and was commemorated in *Cryptocarya murrayi*.<sup>119</sup> Inspector Reginald Charles Heber Uhr was stationed at Cardwell May 1865 to July 1866 and was commemorated in *Melodorum uhrii* (Fig. 10).<sup>120</sup> Uhr was the elder brother of the notorious Wentworth D'Arcy Uhr (1845–1907) who, also as an officer with the native police, was implicated in several massacres of Indigenous people.<sup>121</sup> Reginald Uhr has not been similarly implicated, but was clearly involved in reprisals. On 30 December 1865, a newspaper correspondent at Cardwell noted that the 'blacks have been rather troublesome of late upon the Herbert Station. Inspector Uhr and

troopers have gone up; and we have no doubt from the promptness he constantly shows in attending to these matters, he will disperse them for a time'.<sup>122</sup>

Dallachy himself was eponymized in the names of ~31 plant names by Mueller and other taxonomists, and they are listed in the following footnote.<sup>123</sup> In describing the new taxa to commemorate Dallachy for specimens collected at Rockingham Bay, Mueller did not report any personal or dedicatory details about him, other than to cite his name as the collector of the specimens. There are no known images or reliable physical descriptions of Dallachy. Dallachy Creek, to the north of Cardwell, was also named for him.

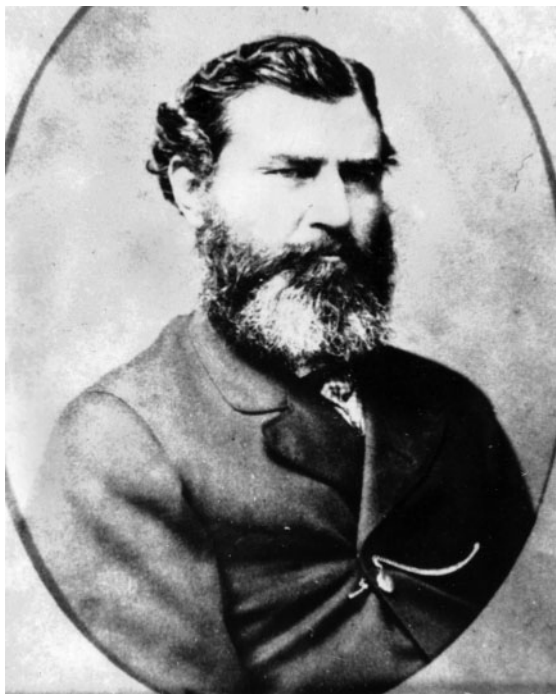
<sup>119</sup> John Murray (b. c. 1827, Dumfries, Scotland; d. 1876, Cardwell), Inspector of Native Police was stationed in Cardwell 1865–70. He married Rachel Little in 1858 at Rosedale Station and had five children, at least two daughters being born in Cardwell at the police barracks at Attie Creek. Jones (1961).

<sup>120</sup> Reginald Charles Heber Uhr (b. 1844, Wivenhoe Station, Brisbane River; d. 1888, Blackall) (Fig. 10) was educated at Kings School Parramatta 1859–61. He joined the Queensland Native Mounted Police in 1863 and was stationed at Belyando River/Suttro River late 1864 to April 1865, at Cardwell May 1865 to July 1866, and thence returned to Belyando River/Suttro River in July 1866. He was appointed Police Magistrate in St. George in 1869 and later Taroom and was then both magistrate and gold warden in Hughenden and Cloncurry. Uhr (1999). Personal communications, Frank Uhr and David Marr.

<sup>121</sup> Anonymous (1863). Anonymous (1865c). Anonymous (1888a). Anonymous (1888b). Uhr (1999). Turner (2018).

<sup>122</sup> Anonymous (1866c).

<sup>123</sup> The taxa named after John Dallachy by Ferdinand Mueller include *Dallachya* F.Muell. [= *Rhamnella* Miq.]; *Acacia dallachyana* F.Muell.; *Amomum dallachyi* F.Muell.; *Casearia dallachii* F.Muell.; *Conospermum dallachii* F.Muell., [nom. inval., nom. nud.]; *Eugenia dallachiana* F.Muell. ex Benth. [= *Gossia dallachiana* (F.Muell. ex Benth.) N.Snow & Guymmer]; *Fimbristylis dallachii* F.Muell. ex Benth. [= *Fimbristylis fimbristylodes* (F.Muell.) Druce]; *Grevillea dallachyana* F.Muell. [nom. inval., nom. nud.]; *Jasminum dallachii* F.Muell.; *Panax dallachii* F.Muell. [nom. inval., nom. nud.]; *Pogonia dallachyana* F.Muell. ex Benth. [= *Nervilia plicata* (Andrews) Schltr.]; *Webera dallachiana* F.Muell. ex Benth. [= *Tarenna dallachiana* (F.Muell. ex Benth.) S.Moore]. The taxa named after John Dallachy by botanists other than Mueller include *Amanoa dallachyana* Baill. [= *Cleistanthus dallachyanus* (Baill.) Benth.]; *Anisomeles dallachyi* A.R.Bean; *Antidesma dallachyanum* Baill. [= *Antidesma bunioides* (L.) Spreng.]; *Bulbophyllum exiguum* var. *dallachyi* Benth. [= *Bulbophyllum newportii* (F.M.Bailey) Rolfe]; *Chenolea dallachyana* Benth. [= *Maireana trichoptera* (J.M.Black) Paul G.Wilson]; *Conospermum mitchellii* var. *dallachii* Meisn. [= *Conospermum mitchellii* Meisn.]; *Cupaniopsis dallachyi* S.T.Reynolds; *Echinus dallachyanus* Baill. [= *Macaranga dallachyana* (Baill.) Airy Shaw]; *Eucalyptus tessellaris* var. *dallachiana* Benth. [= *Corymbia dallachiana* (Benth.) K.D.Hill & L.A.S. Johnson]; *Euphorbia dallachyana* Baill.; *Euphorbia drummondii* var. *dallachyana* Baill.; *Excoecaria agallocha* var. *dallachyana* Baill. [= *Excoecaria dallachyana* (Baill.) Benth.]; *Grevillea alpina* var. *dallachiana* Benth. ex Guilf. [= *Grevillea alpina* Lindl.]; *Phyllanthus dallachyanus* Benth.; *Premna dallachyana* Benth. [= *Premna serratifolia* L.]; *Psychotria dallachiana* Benth.; *Rostellularia adscendens* subsp. *dallachyi* R.M.Barker; *Sida dallachyi* C.T. White [= *Sida magnifica* Domin]; *Solanum dallachii* Benth. [= *Solanum magnificum* F.Muell.].



**Fig. 9.** Inspector John Murray, ~1866. Courtesy of the State Library of Queensland, neg. no. 13929.



**Fig. 10.** Reginald Charles Heber Uhr, 1868, in uniform as sub-inspector of native police. Courtesy of Frank Uhr.

### Collecting itinerary

It is possible to construct a broad and detailed itinerary of Dallachy's collecting travels at Rockingham Bay from the dates and locations provided on his field labels (Supplementary Material 2), although given Dallachy's financial incentive to collect every day, this information should be treated with a measure of caution. There is evidence that Dallachy kept a diary for at least part of his stay at Rockingham Bay, but it does not seem to have survived.<sup>124</sup> Nevertheless, reports from third parties provide some information about Dallachy's travelling companions.

As has already been noted, the number of types that Dallachy collected diminished over time at Rockingham Bay, although it always remained high. The local topography afforded him many opportunities to find novelties as it was highly varied, including swamps, mountain ranges, mangroves and several offshore islands. As described by one of the original twenty European settlers in 1864, Rockingham Bay provided 'an embarrass de richesses' from the point of view of settlement. There was a gravelly ridge extending for about two and a half miles, a convenient supply of water, it

was sheltered from prevailing winds, and there was an abundance of timber to use as building materials including 'melaleuca (tea-tree), Brigalow, and a species of 'stringy-bark' called by the bushmen 'Messmate'.<sup>125</sup> Although this settler noted that a 'considerable amount of jungle will have to be cut through', he described the mountains as easy to ascend.<sup>126</sup>

The impenetrability of the 'jungle' proved to be Dallachy's most often mentioned difficulty at Rockingham Bay. When collecting *Alyxia ilicifolia*, on 14 April 1864, Dallachy had to content himself with a young plant, writing 'there might have been plenty more larger Plants but could not see through the dense scrub above me'.<sup>127</sup> He had similar difficulties collecting *Cryptocarya cinnamomifolia* on 20 December 1867, commenting: 'Saw no flowers—indeed the scrub is so dense here that we had enough to do to see our way through it'.<sup>128</sup>

The settlers made roads as they entrenched their presence in the region but initially, at least, Dallachy probably made use of Aboriginal tracks to move through the bush. Dalrymple found 'a large number of wide native tracks' in the ranges that 'reminded him of the approaches to a village in Ceylon'.<sup>129</sup>

<sup>124</sup> At a meeting of the Field Naturalists' Club of Victoria, 12 March 1934, Frederick Pitcher exhibited a: 'Diary of Collecting Work, dated Rockingham Bay, from March 15, 1864, to August 31, 1864.' According to Doris Sinkora (a former technical assistant at the National Herbarium of Victoria), 'the contents of Fred Pitcher's house were sold by public auction after his death in 1935, and any attempts to find the Dallachy manuscripts have so far been fruitless.' (Letter: D. S. Sinkora to R. M. Dallachy, 'Dallachy, John', biographical file, Library, Royal Botanic Gardens Victoria).

<sup>125</sup> Anonymous (1864b).

<sup>126</sup> Anonymous (1864b).

<sup>127</sup> Lectotype of *Alyxia ilicifolia* F. Muell., <https://plants-jstor-org.elibrary.jcu.edu.au/stable/viewer/10.5555/al.ap.specimen.mel222841>, viewed September 2019.

<sup>128</sup> Syntype of *Cryptocarya cinnamomifolia* Benth., <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel565990>, viewed August 2019.

<sup>129</sup> Anonymous (1864b).

As part of the original settlement party, Dallachy had access to horses, but presumably thereafter travelled mostly by foot. In the late 1860s, telegraph lines began to be constructed in the area, linking nascent settlements, and Dallachy collected along them. He could reach the offshore islands by a small boat, and during his residence at Cardwell visited the Family Islands, Goold, Garden, Brook and Hinchinbrook Islands on several occasions.

Positioned to the north of the Tropic of Capricorn, Cardwell provided Dallachy with a balmy climate in which to work, with maximum temperatures rarely exceeding 30°C or falling below 10°C. Rain mostly fell in a distinct wet season (December to March), but could be heavy, and cyclones probably impacted Dallachy's collecting in 1867 and 1870. A small party exploring a route for the telegraph line were caught by the 1867 cyclone shortly after leaving Rockingham Bay. 'The gale increased during the night', reported a witness, and soon 'their tents were all blown away'. The waters of a nearby lagoon rose rapidly and swamped the camp, while great trees were blown down and 'branches were flying in showers'.<sup>130</sup>

There is no mention of any physical discomfort in Dallachy's surviving notes, but other visitors to Cardwell complained loudly about Queensland's infamous irritants. '[We] turned in very tired', wrote surveyor Alfred Hull on a trip from Cardwell to Halifax Bay in 1871, 'but alas, not to sleep, for the sand flies and mosquitoes effectually prevented anything approaching to that happy state'.<sup>131</sup> More concerning were persistent accounts of 'jungle fever'.<sup>132</sup> '[T]he whole population of the new settlement at Rockingham Bay', reported the *North Australian* in July 1864, 'was indisposed to do anything but swallow physic, crawl about from one room to another, and damn the place'.<sup>133</sup> Deaths from 'jungle fever' continued to be reported,<sup>134</sup> and Dallachy himself succumbed to this complaint after a short illness.<sup>135</sup>

Even if Dallachy padded his collecting itinerary to some extent to ensure his income, the resulting list of dates and localities is still impressive (Supplementary Material 2). Almost constantly on the move within a relatively contained area, Dallachy thoroughly covered the Rockingham Bay region. He climbed mountains, walked along creeks and rivers, trekked through jungles, crossed the waters between islands and the mainland, taking every opportunity to attach himself to the camps of settlers, surveyors and the native police. His last dated specimen was collected on 28 April 1871 at Cardwell just a few weeks before his death. In an attached note, with some evidence of shaky handwriting, but not appreciably worse than usual, Dallachy commented:

Yesterday 28 I went to shoot down a Branch of the tree that I saw covered with white fruit on the 19th inst got only small twig to day Mr Whitefield went with me and I got some more twigs about 80 feet

high and covered with large Bunches of white fruit and beautiful dark green glossy foliage It grows close on the beach but I am almost sure that you got flowers of this tree some time ago JD Is it a *Eugenia*?<sup>136</sup>

Mueller agreed with his now venerable collector that the specimen was a *Eugenia*, and moreover a new species, that he published in 1875 as *Eugenia hemilampra* [= *Syzygium hemilamprum*].

### Dispelling a mango myth

It has been fancifully suggested as part of local Cardwell mythology that Dallachy was involved in the introduction of mangoes to north Queensland.<sup>137</sup> However, this appears implausible as mangoes had been established in Brisbane and other northern settlements by the early 1860s, and seeds were widely distributed by Walter Hill, curator of Brisbane Botanic Gardens, to many places in Queensland.<sup>138</sup> One report quoted Dallachy as saying that any fruit trees or edible plants occurring in Sri Lanka would also grow at Cardwell. The report also noted that: 'pineapples, bananas, oranges, limes, mangoes, guavas, mulberries, the sugarcane, coffee, arrowroot, the pawpaw tree, cocoa nuts and cassava, or the tapioca plant thriving and bearing in the vicinity of Cardwell as healthily as if in their native soil'.<sup>139</sup> This quote appears to have been misinterpreted as evidence of Dallachy's involvement in the introduction of these plants to Cardwell gardens.

### Conclusion

Dallachy's botanical collecting activities were inextricably associated with Mueller's comprehensive taxonomic agenda and expansive botanical enterprise. The two men were in direct or indirect communication for almost twenty years, and their relationship survived Mueller's appointment as director of the Melbourne Botanic Garden; a position created above Dallachy's office of superintendent. It also survived Dallachy's departure from the Melbourne Botanic Garden under the cloud of alcoholism, and eight years of Dallachy working in the tropics in difficult, sometimes dangerous and primitive conditions. Mueller came to Dallachy's rescue in 1862 by creating the position of botanical collector to be based in Queensland and which assured Dallachy of a reliable income for as long as he collected specimens for Mueller.

Dallachy did not disappoint Mueller. He was a prolific collector. Beginning on his first day at Rockingham Bay in January 1864, he maintained a consistent output to within weeks of his death in June 1871. His collections totalled ~3500 specimens from which ~400 new species were described. Rockingham Bay is in the southern portion of the floristically diverse Wet Tropics Bioregion and Dallachy's collections are representative of the entire bioregion

<sup>130</sup> Anonymous (1867c).

<sup>131</sup> Hull (1871).

<sup>132</sup> Anonymous (1864c).

<sup>133</sup> Anonymous (1864d).

<sup>134</sup> Anonymous (1865a).

<sup>135</sup> Dowe and Maroske (2020) see also this issue.

<sup>136</sup> Syntype of *Eugenia hemilampra* F.Muell. <https://plants-jstor-org.ezp.lib.unimelb.edu.au/stable/viewer/10.5555/al.ap.specimen.mel60969>.

<sup>137</sup> Jones (1961). Hubinger (2010). Lavarack (2019).

<sup>138</sup> Hill (1862).

<sup>139</sup> Anonymous (1870b).

as many of the genera and species that he collected have broad distribution.

Apart from herbarium specimens, Dallachy occasionally collected live specimens that were sent to Mueller.<sup>140</sup> As noted by Joseph Maiden: ‘He was one of the best botanical collectors, perhaps the best, ever employed by the Botanic Gardens, and he discovered a large number of new species, particularly in Queensland, and especially at Rockingham Bay—a celebrated locality of his’.<sup>141</sup>

As Mueller’s longest serving paid collector, a significant portion of Mueller’s taxonomic productivity hinged on Dallachy’s collecting activities of which his good judgement, field notes and timely despatch of specimens were key. He used a gun and an axe to obtain specimens, had his own network of collectors, both Indigenous and European, returned to plants in order to get specimens in flower and fruit, and remembered what he had collected already and what was new, although he suggested few scientific names himself. Traveling by boat, horse and on foot, rarely staying in one place for more than several days, Dallachy’s efforts enriched Mueller’s output and in turn that of George Bentham in *Flora Australiensis*, where he is cited as a collector for at least 450 taxa. For botanists working today in the tropical regions of Queensland, the name John Dallachy is synonymous with pioneering resilience, botanical adventure, and taxonomic novelty. Mueller was chary of giving praise to collectors for fear of diminishing his own reputation, but Dallachy was undeniably his most important collector in terms of numbers of specimens and new species, and Mueller gave him lasting acknowledgement by naming one genus, *Dallachya* F. Muell. [= *Rhamnella* Miq.] and eleven species after him. A further 19 taxa were named after him by Bentham and other taxonomists.

## Conflicts of interest

The authors declare no conflicts of interest.

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<sup>140</sup> For example, a living plant of the giant fern *Angiopteris evecta* was collected by Dallachy and despatched to Mueller in late 1870. Anonymous (1870c).

<sup>141</sup> Maiden (1908).

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