

## Nomenclatural notes on New South Wales flannel flowers (*Actinotus* spp., Umbelliferae/Apiaceae) and Leopold Trattinnick's other Australian plant-names

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### Abstract

After a thorough consideration of the history of the European collection and subsequent early cultivation of the commercial flannel flower, lectotypes are designated for *Actinotus helianthi* Labill., *Eriocalia major* Sm. (i.e. *A. helianthi*) and *E. minor* Sm. (i.e. *A. minor* (Sm.) Tratt., the first publication of which is revealed). Other neglected names coined by Trattinnick, including generic ones, applied to Australian and other plants, and published on (generally) plagiarised plates, are discussed and disposed of. One such plate is a copy of the iconotype of *Amaryllis* × *johnsoniana* Ker Gawl., providing an earlier specific epithet for *Hippeastrum* × *johnsonii* (Gowen) Herb. (Amaryllidaceae), a bulbous plant long cultivated in Australia and whose name should be conserved with the later spelling; a synonym, *Amaryllis* × *carnarvoniana* DC. is lectotypified. Attention is drawn to confusions in localities on labels attached to specimens of species (in various families) collected on both D'Entrecasteaux's and Baudin's voyages to Australia.

### *Actinotus helianthi*

Although herbarium material of the now commercially cultivated flannel flower (*Actinotus helianthi* Labill., Umbelliferae/Apiaceae) was collected by Joseph Banks and Daniel Solander at Botany Bay during their first landfall in Australia between 28 April and 5 May 1770, it took more than three decades before the species received a scientific name. Specimens gathered by them in 1770 survive in the Natural History Museum London (BM013717918) with duplicates in the National Herbarium of New South Wales (NSW133494) and the Muséum national d'Histoire naturelle in Paris (P03223682; accessioned 17 November 1911), while the field sketch by Sydney Parkinson, as well as the finished drawing by John Fredrick Miller dated 1774 based on it, are both at BM (Henderson 1983: 152; Diment et al. 1984: 91; Mabberley 2019: 31).

Subsequently, under Banks's auspices, Gabriel Smith produced an engraved copper plate, also at BM, but, perhaps because of the cost of Banks's *Endeavour* Florilegium project, no proper publication of Parkinson's illustration took place until 1901 (Diment et al. 1984: 12–14, 91; Mabberley 2017: 166–67, 2020a: 46–48, 69).

However, in 1800, an image of *Actinotus helianthi* labelled ‘Sun Flower of New South Wales’ was published in England (Mabberley 2020a: 90), but that illustration was not accompanied by a scientific name.

#### *Geographical inconsistencies*

The binomial *Actinotus helianthi* appeared first in *Novae Hollandiae plantarum specimen* (1804–1807) of Jacques-Julien Houtou de La Billardière (Labillardière; 1775–1834) with description (p. 67) and plate (t. 92), published simultaneously in September 1805<sup>i</sup>. However, there are geographical anomalies associated with this taxon (Nelson 1974, 1975; Mabberley 2020a: 152): firstly, Labillardière gave ‘Terra Van Leeuwin’ as its locality, that is Western Australia, where the species is not known to occur, and, secondly, the plant is naturally restricted in distribution to what is now New South Wales and Queensland, regions neither Labillardière nor any other member of the expedition (1791–93) led by Antoine Raymond Joseph de Bruni d’Entrecasteaux (1737–93) is known to have visited. Labillardière must have added an incorrect locality to his account.

Before sailing to Australia, Labillardière had worked in Banks’s herbarium 1783–85 (Mabberley 2020a: 145) so it is possible he saw Banks’ and Solander’s *Actinotus* specimens, but no record of this has been found. It is conceivable that Labillardière’s generic description was made from a species he could have encountered in Western Australia, e.g. *Actinotus leucocephalus* Benth., but no herbarium specimens of the species native there survive in his herbarium now at FI, though, clearly, the plate must have been drawn from material Labillardière did not collect in Australia.

The only vaguely germane specimen at FI is from René Desfontaines’s herbarium (FI059398) with a label in the latter’s hand (M. Callmander, pers. comm., 1 October 2021). It bears Labillardière’s binomial and place of publication, besides Étienne Pierre Ventenat’s unpublished name ‘*Actinodes artemisiaefolia*’ (see below) and James Edward Smith’s *Eriocalia major* of 1806, so at least the last name must have been added to the sheet after Labillardière’s publication. Another specimen with these three names on a label, all in the hand of Desfontaines, is in Paris (P00270102) with, significantly, ‘*Actinodes artemisiaefolia*’ followed by the note ‘Vent. malm.’ and the locality ‘Port Jackson’ (see below).

Nelson (1975) compared a specimen (G0035933) in Ventenat’s herbarium in Geneva with Labillardière’s plate, but pointed out that the annotations with it could not be definitely said to be in Labillardière’s hand. The present authors attribute the long manuscript description now attached to the sheet to Ventenat himself (cf. Burdet 1979), though the note on the accompanying label ‘Nlle Hollande. M. Labillardiere’ is in another, so far unidentified hand. Nonetheless, Nelson annotated this specimen ‘probably HOLOTYPE of *Actinotus helianthi* Labill. not collected by Labillardière’. However, as there is no evidence that Labillardière collected this specimen or wrote on this sheet while the hitherto unconsidered annotation in Ventenat’s hand on this sheet has ‘Nous avons décrit le genre très différemment’ [we have described this genus quite differently], G0035933 cannot be type material. For further discussion of this specimen see below.

#### *Investigation*

A search was therefore undertaken in herbaria known to hold material collected by Labillardière during the D’Entrecasteaux expedition, namely B-W, FI, G, P and elsewhere, but this yielded no *Actinotus* specimens annotated by Labillardière indicating that they were collected by him in Australia. Specimens on sheet KFTA0000083 (Kirov Forestry Academy, Saint Petersburg, Russia: three fragments with labels, one annotated capsule, one unannotated) have neither Labillardière annotations nor any locality information beyond ‘Nov. Holl.’ Two specimens in Geneva, i.e. G0066129 and G00661231 are labelled ‘côte orient.’ and ‘detr. d’Entre.’ respectively and came to Augustin Pyramus de Candolle from the Muséum in 1821. No collectors are indicated and both localities on them are incorrect.

In general, Labillardière seems to have failed to record even generalised localities in the field: in his preliminary manuscript descriptions added to his collections of Umbelliferae/Apiaceae at FI there is no locality information at all. His specimens sent to P may thus have had no locality information. The only sheet with notes, almost certainly in Labillardière’s hand (P-JU No. 10408, left hand specimen), has ‘*Actinotus* LaBillard.’ and the locality ‘Detroit dentecastaux’ [sic; D’Entrecasteaux], that is Tasmania (where it does not grow), with, in Jussieu’s hand (M. Callmander, pers. comm. 1 October 2021), ‘*helianthi* n. holl. t. 92, Nou. Hollande’ and ‘Herb. du Muséum 1815’ added, the latter date apparently being the year of acquisition. In parallel with this, Lamarck, Encycl. 8: 336 (1808) initially quoted Labillardière’s original Western Australian locality but later Jean Louis Marie Poiret changed it to ‘le Cap Van Diemen’, i.e. Tasmania, in Lamarck’s Tableau 3: 589 (1823).

#### *Leschenault de la Tour and/or Robert Brown?*

Nelson (1975), followed by Duyker (2003: 232), suggested that Labillardière’s material was perhaps collected on Baudin’s expedition by Jean-Baptiste Leschenault de la Tour (1773–1826) when in New South Wales. There

he met Robert Brown and they collected plants together, as on 11 May 1802 (Mabberley 1985: 94–95; Vallance et al. 2001: 203).

According to Brown's descriptive slips at BM (Brown MSS B. 65 25/156), Brown collected *Actinotus helianthi* on 17 May 1802, making a description two days later, adding to it Solander's unpublished name *Involucrata candida*. It is conceivable that Brown shared his collection (now Iter Austral. 4508) with Leschenault, but there is no Leschenault specimen at P (but see below) and specimens of *A. helianthi* collected by Brown were apparently accessioned in P only much later – P03223692 and P03223717 from K on 19 January 1884, P03223691 and P03223698 from E on 28 May 1890.

According to his descriptive slips B.65 25/153–154, Brown proposed naming the plant *Patersonia* after Capt. William Paterson (1755–1810), who not only supplied seeds of many New South Wales plants to the English nursery firm of Lee and Kennedy (see below) from as early as 1791 (Mabberley 2020a: 81) but also, perhaps more than coincidentally, has been considered to be the possible source leading to the published illustrations that included 'The Sun Flower...' (Mabberley 2020a: 91). No doubt finding that Labillardière had published *Actinotus* for this new genus whilst Brown was sailing from Port Jackson [now Sydney] to Liverpool, Brown on his return recycled the name, giving it to a new genus of Iridaceae (*Patersonia* R.Br. of 1807), which stands today.

At P there are eleven specimens of *Actinotus helianthi*, mounted on five sheets (P00270103 left hand specimen, P00270104, P00270105, P00270106, P04330868), with printed labels reading 'Nouvelle Hollande, Côte méridionale, Voyage aux Terres-Australes. Capitaine Baudin. 1801', but without the name of any collector. The locality information is incorrect, since *A. helianthi* does not grow along the southern coast of Australia, but the material may have been collected by Leschenault, although this is nowhere mentioned. Another, perhaps parallel, example is that of the Australian pitcher-plant, *Cephalotus follicularis* Labill. (Cephalotaceae), which Leschenault certainly collected in Western Australia in February 1803 (G holo; G00176809, while Brown had already done so there in January 1802 [Brown 1832], these being the first two European gatherings), but, intriguingly, not even Leschenault was acknowledged in Labillardière's publication. This scarcely accords with Aimé Bonpland's assertion that Labillardière 'never looked at other herbaria, because he allowed no-one to look at his' (Mabberley 1985: 195). A sixth P sheet (P04330836) of *Actinotus helianthi* has three elements (the middle one fasciated), again without a collector's name but with a printed label, 'Côte orientale Baudin 1801', which does fit the known general geographical distribution of *A. helianthi* but could perhaps be Leschenault's (or even material given to him by Brown).

Other troubling localisations include the case of another member of Umbelliferae/Apiaceae, *Azorella lanceolata* Labill. (today's *Platysace lanceolata* (Labill.) Druce). It occurs only on the east coast of Australia (but not Tasmania) whereas the type locality is given as 'Terre van-Leuwin [Western Australia]' (Labillardière 1804–7: 74) though the specimen, P00270083, has the locality 'Detr D'Entrecasteau [Tasmania]' on the label. In completely different families (see also Nelson 1974, 1975), similar confusion obtains: the lectotype of *Nemodra elaeagnoidea* A. Juss. (today's *Aglaia elaeagnoidea* (A. Juss.) Benth., Meliaceae), a tropical species collected on Baudin's voyage, bears a printed label with 'Ile St Francois', i.e. St Francis Is., Nuyts Archipelago, South Australia (Mabberley 1988: 75); the locality of *Eucalyptus ovata* Labill. (Myrtaceae) is given as what is now Western Australia, but the tree is restricted to the south-east of the continent, including Tasmania, where Labillardière himself collected it (Mabberley 2020a: 152); the type specimen of *Persoonia saccata* R.Br. (Proteaceae) collected on Baudin's voyage is labelled 'Sharks Bay', i.e. 600 km north of the known distribution, within which native range the expedition is known to have collected plants in general (Weston 1994).

It is unlikely that such localities were added to deliberately mislead as part of some kind of 'commercial in confidence' ruse, so it has to be concluded that, upon being accessioned at P, printed labels were rather carelessly attached to specimens collected during both the D'Entrecasteaux and the Baudin voyages, leading to the nonsensical localisations burdening the literature - though this does not fully explain all of Labillardière's errors and omissions. In his defence, it must be borne in mind that his own collection was taken from him in Java, the "twenty-two biscuit cases, completely filled with dried plants with descriptions and observations.... noted in abbreviated form which he alone understands, and which remind him of an infinity of things which can only respond to his memory" being confiscated by the British and passed to Queen Charlotte (Stafleu 1967: Duyker 2003: 207–211, 224; Mabberley 2020a: 150). Only in 1796, through the good offices of Joseph Banks, were they restored to Labillardière, but their condition by then is unrecorded.

On the other hand, the apparently blatant non-acknowledgment of Leschenault's work may well reflect other prevailing attitudes and prejudices (cf. Mabberley 2020b). Leschenault was on 'the opposite side' from 'citoyen' (originally bourgeois) Labillardière with his fervent attachment to the French Revolution (Jeandet 1883, Stafleu 1966, Chevalier 1953, Duyker 2003). Leschenault, with his noble father and brother, was imprisoned during the Reign of Terror in 1793, following the promulgation of the 'Loi sur les Suspects' and was released

only after the death (1794) of Robespierre; the Leschenault family fortunes were restored only with the return of the Bourbon monarchy in 1814. Moreover, unlike the unbending and reportedly misanthropic Labillardière (Chevalier 1953, Stafleu 1966, Duyker 2003: 232), the gregarious Leschenault, despite his background, was pliant enough to get support from Napoléon Bonaparte in the form of being appointed a member of Baudin's team – long before the Bourbon Restoration.

#### *Cultivated in France?*

Ventenat's manuscript note now attached to G0035933 (see above) suggests that he intended to describe as a new species the material he had before him. Indeed, several more specimens of *Actinotus helianthi* are known with the annotation '*Actinodes artemisiaefolia* Vent.', e.g. P-JU No. 10408, central specimen, with the note 'An 5 [1805] jard[in]. de malm[aison].' in Ventenat's hand; P03223718 has the annotation 'Actinotus Helianthi. La Bill. Nov. Holl. t. 92. Actinodes artemisiaefolia Vent. Malm.' in an unknown hand, while P03223677 has 'Vent. hort. Malm.'. Perhaps significantly, a pencil sketch has been attached to P03223718, showing the central flower head and the details 1, 3, 4 and 6 of plate 92 of the *Novae Hollandiae plantarum specimen*. This drawing is annotated 'LaBill. Nov. Holl. fasc. t. 92 Actinotus Helianthi' in an unknown hand and may have been made by Pierre-Antoine Poiteau (see below) or merely copied by another hand from Poiteau's published plate in Labillardière's book. The text on the verso of the pencil sketch is a brief description ending with the note 'LaBill. pag. 67'. Significantly, G0035933 (see above) also bears the name '*Actinodes Artemisiaefolia* Vent.' and is likely a duplicate of P-JU No. 10408, central specimen (M. Callmander, 1 October 2021, pers. comm.). Although the specimen in Geneva bears no reference to Malmaison, it is possible that this specimen was cultivated in the garden there.

Ventenat had been commissioned to describe plants cultivated in Joséphine Bonaparte's garden at Malmaison in what is now a western suburb of Paris (Callmander et al. 2017). This resulted in the publication of his *Jardin de la Malmaison* (1803–05) where several new or rare plants cultivated there were described by Ventenat. However, neither in this nor in any other work did Ventenat validate his '*Actinodes artemisiaefolia*', likely because Labillardière had beaten him to it by publishing his *Actinotus helianthi* in September 1805. On the other hand, Ventenat beat Labillardière with another plant: *Callistachys elliptica* Vent. predates *Gompholobium ellipticum* Labill. (i.e. *Oxylobium ellipticum* (Vent.) R.Br., Leguminosae/Fabaceae; Chappill et al. 2008).

Several nurseries are known to have supplied plants to Joséphine's gardeners as well as to the Jardin des Plantes in Paris, pre-eminent among them being Lee & Kennedy (Willson 1961), a London firm for which Joséphine was one of its most indulgent customers (Mabberley 2020a: 163). Despite hostilities between France and Britain during the Napoleonic period, Lee & Kennedy, besides the botanist James Edward Smith, the English patrons Aylmer Bourke Lambert, Charles Greville and Emperor Woodward (who had his own collector in New South Wales – Letouzey 1989: 603), as well as other nurserymen like William Forsyth and Daniel Grimwood, continued to be important sources of Australian novelties as seeds or plants for the French (Mabberley 2020a: 140). It is not impossible that, through one or more of them, living material (plants or seeds) of *Actinotus helianthi* reached Paris. It may indeed not be entirely coincidental that in England the plant had been called 'sun flower', as if *Helianthus*, and thus received the specific epithet '*helianthi*' conceivably associated with plants or seeds exported from England – but the name was to be validly published only in France.

However, there is no hard evidence that *Actinotus helianthi* was in cultivation in England by then and it is not listed in W.T. Aiton's *Hortus kewensis* (1810–13) or Robert Sweet's *Hortus suburbanus londinensis* (1818). Friedrich Dietrich, *Nachträge zum Vollständigen Lexicon der Gärtnerei und Botanik*. 3: 218 (1817) pointed out that it was not then being grown in Germany or anywhere on the Continent (but see below). By the 1820s (see Edwards, *Botanical Register* 8: t. 654, 1822), though, the name *Actinotus helianthi* was certainly being applied to the Port Jackson (New South Wales) plant reportedly being newly grown in England, where it had first been called *Eriocalia major*, now with the latter name correctly in synonymy, apparently for the first time.

If Labillardière's material did not come from the British, could it have been collected by one of the gardeners of the Baudin expedition in Australia? When *Naturaliste* arrived at Le Havre (Normandy, France) on 7 June 1803, André Thouin, professor of horticulture at the Muséum, was sent there to take care of the botanical collections destined for his institution. However, he was also instructed to let Joséphine have any material her gardeners requested (see letter of Minister Chaptal to the professors of the Muséum dated 13 June 1803; Jouanin 1997). When the second frigate, *Géographe*, arrived at Lorient (Brittany, France) on 25 March 1804, the same applied to Geoffroy Saint-Hilaire, professor of zoology at the Muséum, dealing with the biological collections. Again, the plant materials were split between

the Muséum and Malmaison (Jouanin 1997). Specimens of *Actinotus helianthi* could thus have been simultaneously supplied to both (and subsequently cultivated in) Malmaison and the Jardin des Plantes in Paris. Evidence for the latter is found on a sheet of *Actinotus helianthi* (P-JU No.10408); the righthand specimen has a scarcely decipherable, miniscule note in Jussieu's hand, 'in hortus mus paris 1805' [in the garden of the Muséum in Paris 1805].

Labillardière, associated with the Muséum, and Ventenat with Malmaison have been regarded as rivals. The Linnaean Desfontaines was Labillardière's champion, Jussieu, reviver of the Natural System, Ventenat's, in this 'long-time split' in Paris botany (Stafleu 1966; see also Duyker 2003: 227, 233), in other words the same tension as was that shortly afterwards between Karl Sprengel and Friedrich Dietrich in what is now Germany (Mabberley 2020b). This would help explain why Labillardière and Ventenat worked independently on these Australian plants - and in a competitive way.

It seems implausible that participants of the D'Entrecasteaux expedition, like the gardener Félix Delahaye (de Lahaye, de Lahaie, Lahaie; 1767-1829; Duyker 2003, 2005) or Louis Ventenat (1765-1794; Duyker 2000) played any part in the successful introduction of *Actinotus helianthi*, as their seed collections would have long lost their capacity to germinate. However, Delahaye became gardener to Joséphine, firstly at the Trianon (Versailles), then at Versailles itself and eventually at Malmaison in 1805 (Stafleu 1966: xxxi; Letouzey 1989: 228; Duyker 2005; Mabberley 2020a: 143).

Perhaps through Delahaye, though more likely from the Jardin des Plantes, living material of *Actinotus helianthi* could have reached Labillardière, who then would have prepared, based on it, a specific description and added the illustration (by Pierre-Antoine Poiteau [1766–1854], working as a freelance illustrator in Paris) in his *Novae Hollandiae plantarum specimen*. This is not entirely impossible since, for example, a specimen of *Callistachys lanceolata* Vent. (Leguminosae/Fabaceae), reportedly raised from seeds brought back from the Baudin expedition, was described as new to science in the last fascicle of *Jardin de la Malmaison* and illustrated there (Ventenat 1803–1805: t. 115). This fascicle appeared in November 1805, just two months after Labillardière had published *Actinotus helianthi* in his *Novae Hollandiae plantarum specimen*. Plants of *Actinotus helianthi* in Australia can produce flowers in as little as eight months from seed (Worrall et al. 2004), but seed viability is reported to be low after 153 days (Emery et al. 2017). *Naturaliste* with Baudin expedition collections left Sydney on 18 November 1802, reaching France in June 1803, so that it is just conceivable that some seeds survived the voyage, the resultant plant(s) flowering in Paris - to be drawn, but then die out completely soon afterwards. The right-hand specimen of P-JU No. 10408 (see above) with the correct locality information 'Port Jackson' seems to accord with this possible sequence of events.

The Baudin expedition had five gardeners (Jones 2017), but which of them could or might have collected material of *Actinotus helianthi* is impossible to say. Lists of plant material collected in Australia by one of them, Anselme Riedlé [Anselm Riedle], who died in Timor, survive (MNHN Paris, BC, MS 1685) as do reports by another gardener, Antoine Guichenot [Guichenault; Nelson 1976] who, when about to leave Port Jackson, listed on 9 November 1802 (MNHN, BC, MS THO273) two boxes of seeds. But, tantalisingly, there is no evidence that seeds of *Actinotus helianthi* were in those boxes. Moreover, in neither FI nor P is there any trace of Poiteau's drawing, which might have had annotations linking it to living material grown in France.

### Conclusion

By comparison with the perpetrators of the geographical confusions above, Friedrich Dietrich (1817: 218) had the correct geography (but placed *Actinotus helianthi* (1805) in the synonymy of *Eriocalia major* Sm. (1806), following J.E. Smith in Rees, *Cyclopaedia* 13, 2 (26) *Eriocalia* (1809), who had considered *Actinotus* inadmissible, as the name was earlier used in mineralogy for what is now actinolite [including nephrite and a form of asbestos]). Smith's *Eriocalia major* was based on specimens and a drawing sent from Port Jackson by Surgeon John White of the First Fleet, besides the published plate by James Sowerby.

Although the matter, then, was, in some senses, sorted out over 200 years ago, none of the surviving *Actinotus helianthi* specimens discussed above (the most promising being the right-hand specimen of P-JU No. 10408) can be incontrovertibly associated with Labillardière before his publication, so that stability is best served by selecting the only undoubted surviving 'original material' in his protologue, namely the published plate (Fig. 1) as lectotype for the name *A. helianthi*.

This investigation has been concentrated on a single Labillardière species: from our findings above, there would appear still to be further, possibly extensive, work to be done to resolve other geographical anomalies in his Australian taxa - a task beyond the scope of this paper.



Fig. 1. *Actinotus helianthi*. Lectotype (image courtesy Peter Crossing Collection; photograph by Jaime Plaza).

*Actinotus helianthi* Labill., *Novae Holl. Pl. Spec.* 1: 67 + t. 92 (1805).

Lectotype [icon] **designated here** by M.J. Henwood and D.J. Mabberley: Auguste Plée (engraving, 'Actinotus helianthi'), after Pierre-Antoine Poiteau, in Labill., *Novae Holl. Pl. Spec.* 1.: t. 92 (1805).

*Eriocalia major* Sm., *Exot. Bot.* 2: 37 + t. 78 (1806). (See Fig. 2)

Lectotype **designated here** by M.J. Henwood and H.W. Lack: New South Wales, Port Jackson, *J. White s.n.* in Herb. Sm. 478.1 (LINN-SM); isolecto: G00415882 (G).



**Fig. 2.** *Actinotus helianthi* (left) *Eriocalia major*, James Sowerby in J.E. Smith, *Exotic Botany* 2: t. 78 (1806); (right) Unknown engraver after Sowerby in Trattinnick, 'Tabulae' t. [275] (1816?) with added details taken from Ple[acute accent]'e's engraving (see Fig. 1).. Courtesy Peter Crossing Collection; photographs by Jaime Plaza.

Note: Sowerby's plate was likely redrawn from a sketch made in New South Wales and sent with a specimen by Surgeon White to Smith's druggist friend, Thomas Wilson (Mabberley 2020a: 92). Trattinnick's plate is a copy, in reverse, of that engraved by Belling after Ignaz Strenzel (see below) copying and 'improving' Sowerby's plate (in reverse) before 1816, as Belling's engraving was published in Trattinnick's much delayed *Thesaurus botanicus* ([1805-] 1819), t. 73 (the only discernible watermarks in the plates of the copy of the book in the Peter Crossing Collection are '1803' – see below).

### **Actinotus minor**

The second New South Wales species to be scientifically described was also first collected by Banks and Solander (BM013717919, BM013717920, BM013717921, with duplicates at the National Herbarium of New South Wales (NSW133686, NSW264211, NSW133497)) but was published even later than was *A. helianthi* - as *Eriocalia minor* Sm. (1806), based on materials (specimens and drawing), sent to England by Surgeon John White, and the published plate by Sowerby. In standard databases, its placement in *Actinotus* is attributed to Candolle's *Prodromus* in 1830, but Leopold Trattinnick, as pointed out by Mabberley (2020a: 349), published the binomial as 'Actinotus minor m[ihi]' before that, and issued an unsigned, coloured engraving copied from Sowerby's drawing for Smith's *Eriocalia minor*:

<sup>1</sup>\**Actinotus minor* (Sm.) Tratt., *Ausg. Taf. Archiv* 3: 47 & t. [216; unsigned] 'Actinotus minor m[ihi]'. (1814); Tratt., *Freye Auswahl Pflanzenabbild.* n. 276 (1816) & t. [276] (1816?); DC., *Prodr.* 4: 83 (1830).

Basionym: *Eriocalia minor* Sm., *Exot. Bot.* 2: 39 + t. 79 (1806). (See Fig. 3)

Lectotype **designated here** by M.J. Henwood and H.W. Lack: New South Wales, Port Jackson, J. White s.n. in Herb. Sm. 478.2 (LINN-SM); isolectotype: G00415883 (G).



**Fig. 3.** *Actinotus minor* (left) engraving by James Sowerby in J.E. Smith, *Exotic Botany* 2: t. 79 'Eriocalia minor' (1806); (right) Unknown engraver after Sowerby in Trattinnick, 'Tabulae' t. [276] (?1816). Courtesy Peter Crossing Collection; photographs by Jaime Plaza.

Note: Sowerby's plate was likely redrawn from a sketch made in NSW sent with a specimen by Surgeon White to Smith's druggist friend, Thomas Wilson (Mabberley 2020a: 92).

### Trattinnick names of other, largely Australian, plants

Subsequent to this, his first, excursion into Australian botany, and more importantly perhaps, Leopold Trattinnick (also Trattinick, Trattinnik, Trattinik; 1764–1849), later coined completely new names for other Australian plants. These, also neglected, names were largely published on plates, generally pirated as in 'his' *Actinotus* plates discussed and illustrated above. Trattinnick was not the first to work like this, an earlier Central European example centred on an Australian plant being the case of *Acacia verticillata* L'Hér. (Leguminosae/Fabaceae). This was first described in L'Héritier's *Sertum anglicum*: 30 (1789), based on a David Nelson

<sup>1</sup>\* = Corrections and additions to APNI and other databases

herbarium specimen collected in Adventure Bay, Tasmania, in 1779 during Cook's third voyage, but the cited plate (as tab. 41) was never published. However, this plate was copied by A.J.G.K. Batsch (1761–1802), an early exponent of the natural system of classification, and appeared as 'Mimosa verticillaris' in the second edition of his *Der geöffnete Blumengarten* (1802; Mabberley 2020a: 336–37).

Trattinnick was a botanist of private means; from 1808 until 1835 he was the first (paid) curator of the newly founded Pflanzencabinet in Vienna (Svojtka 2015), which in 1810 became part of the k[aiserlich] k[önigliche] Vereinigte Hof-Naturalien-cabinette then headed by Carl Franz Ritter von Schreibers (Riedl-Dorn 1998: 265). Trattinnick was in a privileged position: he was a member of the Imperial Household and had ready access to books in both the Imperial Library and the private library of Franz I, Emperor of Austria. Moreover, these two libraries and the botanical collections, of which Trattinnick was curator, were all housed in the same building, namely the Hofburg palace in Vienna.

Like Robert Brown, Trattinnick was an early exponent of the Natural System of classification as he set out in his *Genera plantarum* of 1802, an unillustrated work. Trattinnick also produced a whole series of illustrated books. Again, many of the illustrations in these were copied from other works. His *Thesaurus botanicus* ([1805–] 1819) is perhaps his first such 're-use' of the plates of others, those copied including illustrations in Andrews's *Botanist's repository* (1797–1815), Cavanilles's *Icones et descriptiones plantarum* (1791–1801), and Ventenat's *Jardin de la Malmaison* (Mabberley 2020a: 349). Trattinnick's book was planned to be issued in 20 parts of four plates each; the first five numbers were available in 1805, but the rest, reportedly delayed by the 'Napoleonic Pause', not until 1819. The finely coloured engravings are after images redrawn by, among others, Ignaz Strenzel (1786–1832) of the k[aiserlich] k[önigliche] Akademie der vereinigten bildenden Künste in Vienna, and Franz Reinelli (1785–1812), known for flower decoration on porcelain. All the plates of Australian plants figured were 'recycled' images, though some were genuinely 'improved' by the new artists (see *Actinotus helianthi* above).

In 1811, while the *Thesaurus botanicus* was 'paused', Trattinnick published a *Plan eines botanischen Universalwerks, welches unter dem Titel Archiv der Gewächskunde, und in besonderen Unterabtheilungen unter ebenso vielen Titeln erscheint* [Plan for a botanical work of universal scope, which is published under the title Archiv der Gewächskunde in special subsections with the same number of different titles]. Judging from the subtitle, Trattinnick was aiming this projected work at a broad market, listing 'physicians, surgeons, vets, apothecaries, gardeners, forest officers, farmers, travellers, manufacturers, artists, dyers, educators, statisticians and all those who are interested in botanical knowledge'. This was an ambitious plan (Lack 1981), and resulted in several publications with different titles (among them *Archiv für Gewächskunde*, 1811–18), though the whole project was neither successful nor completed. One of the reasons for its failure was the fact that many illustrations were copies of familiar published images. Furthermore, the *Archiv für Gewächskunde* had uncoloured illustrations, while his *Ausgemahlte Tafeln aus dem Archiv für Gewächskunde* (now an extremely rare book with just three copies traced in public libraries) comprised coloured illustrations, though the associated cheaper price seems not to have made up for that; their plate numbers differ and there are different numbers for individual illustrations.

The rationale behind Trattinnick's plagiarism seems to have been an apparently altruistic motive to make plates in otherwise expensive and inaccessible works available, his going as far as to reduce the prices of his own publications (Mabberley 2020a: 302). However, such discounts may have been as likely acts of desperation because, perhaps in part due to bad business decisions on such ventures, he was depleting his inherited fortune (Wunschmann 1894). In particular, his *Archiv der Gewächskunde* was an attempt (subsidised by himself, the title pages bearing the note 'auf Kosten des Herausgebers' [at the publisher's expense]) to make available, in an inexpensive serial, illustrations of a wide range of plants, by copying most of them from earlier expensive works, using more-than-competent local engravers to copy the plates. In 1816, apparently giving up on the project as originally conceived, Trattinnick issued a prospectus listing, without descriptions, many more plates than he had already published: *Freye Auswahl einzelner Pflanzenabbildungen in schwarzen Kupfern*, pp. [4] with *Index 800 Iconum Plantarum pro libero delectu singularium*. There is a copy, without any obvious provenance, bound with a selection of the issued, unnumbered but named, plates, without title-page or other letterpress, in the Peter Crossing Collection, Sydney. The copper plates are numbered in pencil corresponding to the pencil annotations in the prospectus (the only other recorded surviving copies of the prospectus are in the Herzogin-Anna-Amalia-Bibliothek in Weimar, Germany - shelf mark Ruppert 5182, formerly in the private library of no less than Johann Wolfgang von Goethe, and in the library of Kroměříž, the palace of the archbishop of Olomouc, in Czechia, this copy being filed with four boxes containing 519 unbound plates<sup>ii</sup>): box 1 with 138, box 2 with 136, box 3 with 139 and box 4 with 106 plates.

According to Trattinnick's prospectus, the illustrations were on sale for just one year, after which the plates would be destroyed, but that seems not to have eventuated because, in 1819, the prospectus was reprinted in

two journals, *Jahrbücher der Gewächskunde* and *Isis to Litterarischer Anzeiger*, as further advertising. Later it was reprinted yet again in Trattinnick's *Botanisches Taschenbuch* (1821), once more without any descriptive material relating to the individual plates.

Whether or not all 800 plates, which include some which Trattinnick had already published with the same numbers in *Archiv der Gewächskunde*, were issued requires further research in European libraries, but even the selection in the Peter Crossing Collection is revealing. That set has 368 plates bound in more-or-less alphabetical order, annotated with pencil numbers bound in numerical order, but with many gaps, suggesting that the unknown collector, for whatever reason, eschewed binding (or buying) those missing here. Indeed, this set appears to include all those engravings thought at the time to be depicting new plants: the first collector thus seems to have been a discriminating one. Several of those plates unissued beforehand have 'analysis' and therefore their accompanying new names coined by Trattinnick are validly published there, typified by the plates themselves.

Then, in 1821, there appeared Trattinnick's *Auswahl vorzüglich schöner, seltener, berühmter, und sonst sehr merkwürdiger Gartenpflanzen, in getreuen Abbildungen nebst Erläuterungen über ihre Charakteristik, Verwandtschaft, Klassification, Geschichte, Verwendung, Cultur, und ästhetischen Ansichten* [Selection of exquisitely beautiful, rare, famous and otherwise very unusual garden plants, in accurate illustrations, together with explanations of their characteristics, relationships, classification, history, use, culture and aesthetic properties] in two volumes, the first with 1–100 unnumbered, uncoloured, engraved plates, the second with 101–200 also unnumbered. This is now a very rare book, but it was intended to continue Trattinnick's efforts to make illustrated botanical works available to a wider audience. There are copies in the State Library of New South Wales, Thüringer Universitäts- und Landesbibliothek Jena, Bayerische Staatsbibliothek München, Universitätsbibliothek Regensburg, and Österreichische Nationalbibliothek Wien. Some plates were drawn by Trattinnick himself, though the artists for many others are unknown, but some are signed and are attributable to Baron Franz Xaver von Eyb (1795–1859), with many engraved by Joseph Seher (1781–1836). Several seem to be the plates listed in the 1816 prospectus and are again copied from published works, notably Smith's *Exotic botany*, e.g. t. 10, James Sowerby's *Dendrobium speciosum* Sm. (Orchidaceae), re-engraved by Seher as Trattinnick's t. [65] (1821), the pair reproduced side by side in Mabberley (2020a: 205).

The copy of this Trattinnick book in the Peter Crossing Collection has descriptions and discussions of plants (more than 40 Australian) depicted in the plates (again numbered in pencil), some of which have drawn anatomical analyses. Volume 1 begins with three species of *Banksia* and later has other Proteaceae besides many South African *Erica* spp., but also 'new' species like *Amaryllis candida* (see below), complete with what is in effect a generic monograph of *Amaryllis*. Trattinnick continued to utilise his stock of plagiarized plates in his *Genera nova plantarum* (1825) and his *Botanisches Album, oder Sammlung ausgewählter naturgetreuer Abbildungen* (c. 1850, so perhaps posthumous) with 150 engraved plates, again numbered in pencil.

Trattinnick's botanical papers (and therefore any unsold plates) are lost. According to a file 'Angebot des Nachlasses von Leopold Trattinnick 11. X. 1902 – 10. II. 1912' in the archive of the Österreichische Nationalbibliothek in Vienna, on 11 October 1902 a certain 'Regierungsrätin Prof. Weiss' offered to sell the Trattinnick effects to the Fideikommißbibliothek (FKB), the private library of the imperial family in Vienna. Although the offer was repeated, it was to be turned down on 17 December 1908 because of, among other things, a lack of interest in botanical works and the fact that copies of all of Trattinnick's published books were already in the FKB. On 20 August 1912 the Vienna bookseller Karl Trau tried to sell Trattinnick's miscellaneous papers to the director of the Generaldirektion der k[aiserlich] und k[öniglicher] Familienfonds [general directorate of the imperial and royal family foundation] for 9000 Kronen (perhaps some \$200 000 today). This, too, was rejected, on 9 December 1912, because the price was considered exorbitant and, according to the file, Trau, had tried, rather unwisely and clearly unsuccessfully, to bribe the head librarian of the FKB.

### The '1816' plates

According to his prospectus, Trattinnick's '1816' plates, were offered for sale as available from 31 December 1816. His very many *Eryngium* plates in the set were cited in 1820 by Karl Sprengel in Schultes, *Syst. Veg.* 6: 316 et seqq., e.g. p. 331 including tt. 763, 764 (*Eryngium humile* even with a new varietal description apparently based on the latter plate); *Hosta japonica* t. 89 was cited by Kunth, *Enum. Plant.* 4: 591 (1843) and at least two more are in IPNI/POWO also as 'Tabulae', that is n. 333: *Amaryllis brasiliensis*, the hybrid between *Hippeastrum reginae* (L.) Herb. and *H. vittatum* (L.Hér.) Herb., the first-raised hybrid *Hippeastrum* (see below) and n. 488: *A. candida* (also see below). Other IPNI 'Tabulae' are *Imperata ovata* tab. 569 and *Primula spectabilis* tab. 426, but both these names were published by Trattinnick before the 1816 plates were issued, unlike those on several plates in the Peter Crossing Collection.

It must be concluded that these plates were in circulation at the time: it stretches the bounds of credulity to consider that, with Trattinnick's extensive networks, besides advertisements in two journals of relatively wide circulation, no more than two sets were printed and distributed, even if they are very rare today. As these plates seem to have been available individually, further surviving examples are likely to be found in collections of prints and drawings, rather than in bound volumes on library bookshelves, though, perhaps surprisingly, none has yet been found in either Staats- und Universitätsbibliothek Göttingen, or Naturhistorisches Museum Wien (Archives, Department of Botany) or Universitätsbibliothek Wien. Nonetheless, three previously unrecognized plates have already been found in the collections of unbound drawings and prints filed in the herbarium 'wings' (not library) at Royal Botanic Gardens, Kew – see *Amaryllis candida* below.

A purist might argue that as the '1816' plates themselves have no reference to the prospectus (except for the numbers added in pencil), the new names should be attributed to the artist and/or engraver on them, rather than to Trattinnick, but some plates, including the two below with new generic names, have neither artist's nor engraver's names, so we have attributed them here to Trattinnick.

The plates with analysis and bearing new names are as follows (with one other unconsidered Trattinnick name added for completeness). Note that *Portenschlagia* Tratt. on two other such plates is a new generic name (= *Elaeodendron* Jacq. (1782)), named after Franz Edler von Portenschlag-Ledermayer (1772–1822), and is generally considered to have been published in 1818 by Trattinnick, but it is represented by these plates (with analysis) figuring *P. australis* Tratt. (n. 250 of the 1816 Prospectus = *E. australis* Vent., Celastraceae), and *P. integrifolia* Tratt. (n. 284 of the Prospectus = *E. australe* var. *integrifolium* (Tratt.) DC.), both from Australia, but it is as yet to be shown that these separate plates were distributed before 1818, either together or at different times.

\**Akkermannia* Tratt., \**A. florida* Tratt., *Freye Auswahl Pflanzenabbild.* n. 286 (1816) & t. 'Ackermannia florida' (?1816); Tratt. in *Jahrb. Gewächskunde* 1: 170 (1819); *Isis, Litterr. Anzeiger* 1819: 198 (1819); Tratt., *Bot. Taschenbuch* 1: 331 (1821) = *Myoporum* Banks & Sol. ex G.Forst., *M. tetrandrum* (Labill.) Domin (Scrophulariaceae, Australia). (Fig. 4)

Notes: The generic name<sup>iii</sup> apparently commemorates Trattinnick's printer, Johann Emanuel Akkermann (1764–1836), and antedates both *Ackermannia* Pat. (1902) = *Sclerocystis* Berk. & Broome (Glomeraceae) and *Ackermania* Dodson & R. Escobar (1993) = *Benzingia* Dodson (Orchidaceae). This unsigned illustration, with analysis, was copied, the main figure in mirror image, from Plée after Poiteau in Labillardière, *Novae Hollandiae Plantarum specimen* 1: t. 82 'Pogonia tetrandra' Labill. 1805, so the binomial could be taken to be a nomen superfluum, if use of the same plate is an 'indirect reference' (cf. ICN Art. 41.3), but we are assured that there is insufficient linkage in the prospectus text itself for this to be so (John McNeill in litt. 17 Mar. 2020) and Trattinnick's names are therefore validly published, the plate itself being an iconotype. *Myoporum tetrandrum* is restricted to southwest Western Australia.

\**Amaryllis candida* Tratt., *Freye Auswahl Pflanzenabb.* n. 488 [2 plates] (1816) & 2 tt. 'Amaryllis candida' (?1816); Tratt. in *Jahrb. Gewächskunde* 1: 175 (1819); *Isis, Litterr. Anzeiger* 1819: 198 (1819); Tratt., *Bot. Taschenbuch* 1: 337 (1821); Tratt., *Auswahl Gartenpfl.* 1: 34, 41, tt. [21, 21 bis] (1821, non Lindl. in *Bot. Reg.* 9: t. 724 (1823) = *Zephyranthes candida* Herb. (1826)), = *Crinum jagus* (J.Thomps.) Dandy (Amaryllidaceae, tropical Africa).

Notes: The unsigned ?1816 illustrations with analysis, engraved by Joseph Seher were copied from Redouté, *Liliacées* 4: t. 181 'Crinum giganteum' Redouté. 1807, so the binomial could be taken to be a nomen superfluum, if use of the same plate is an 'indirect reference' (cf. ICN Art. 41.3), but we are assured that there is insufficient linkage in the prospectus text itself for this to be so (John McNeill in litt. 17 Mar. 2020) and the name is therefore validly published. We are indebted to John David (WSY) for recognising the copied Redouté image of this tropical African plant. There are examples of both of these Trattinnick plates at K (Julia Buckley in litt. 1 June 2021, in response to a recent specific request by DJM to look for them: a third, of *Amaryllis* (i.e. *Nerine*) *sarniensis* L. has subsequently been found – Julia Buckley in litt. 24 June 2021).

\**Astragalus involucratus* Tratt., *Freye Auswahl Pflanzenabb.* n. 293 (1816) & t. 'Astragalus involucratus' (?1816), Tratt., in *Jahrb. Gewächskunde* 1: 175 (1819); *Isis, Litterr. Anzeiger* 1819: 198 (1819); Tratt., *Bot. Taschenbuch* 1: 331 (1821); non Lipsky (1901 = *A. cottonianus* Aitch. & Baker) = *A. galactites* Pall. (Leguminosae).

Notes: Plate drawn & engraved by Ignaz Albrecht (1759-?) with analysis, perhaps original work. We are very grateful to Andrey Sytin (Saint Petersburg) for this identification.

\**Baumgartenia* Tratt., \**B. sobolifera* Tratt., *Freye Auswahl Pflanzenabbild.* n. 619 (1816) & t. 'Baumgartenia sobolifera' (?1816); Tratt. in *Jahrb. Gewächskunde* 1: 175 (1819); *Isis, Litterr. Anzeiger* 1819: 198 (1819); Tratt., *Bot. Taschenbuch* 1: 341 (1821); Tratt., *Auswahl Gartenpfl.* 1: 110, t. [60] (1821); Tratt., *Rosac. Monogr.* 1: 14 (1823) = *Kalanchoe* Adans.; *K. pinnata* (Lam.) Pers. (Crassulaceae).

Notes: A plant native in Madagascar, but an environmental weed in eastern Australia and elsewhere. Undoubtedly the name commemorates Johann Christian Gottlob Baumgarten (1765–1843), botanist resident in Vienna. Unsigned image,

with analysis, copied from Hooker, *Paradisus Lond.* 1: t. 3 ‘Bryophyllum calycinum’ Salisb. 1805, so the binomial could be taken to be a nomen superfluum, if use of the same plate is an ‘indirect reference’ (cf. ICN Art. 41.3), but we are assured that there is insufficient linkage in the prospectus text itself for this to be so (John McNeill in litt. 17 Mar. 2020) and the names are therefore validly published with the plate itself as iconotype; in *Auswahl*, however, Trattinnick explicitly includes *Bryophyllum calycinum* in the synonymy. Likely antedates *Baumgartenia* Spreng. (1817) = *Borya* Labill. (1805); *Baumgartia* Moench (1794 = *Cocculus* DC. [1817], nom. cons.) also commemorates Baumgarten.

\**Johannia microphylla* (Bonpl.) Tratt., *Archiv Gew.* 1: 13, t. 82 (1812); Tratt., *Obs.*: 51 (1812); Tratt., *Ausg. Taf. Arch.* 1: n. 8, t. 8 (1813); Tratt., *Freye Auswahl Pflanzenabb.* n. 82 [i.e. same number as in *Archiv*] (1816); F.G.Dietr., *Nachtr. Vollst. Lex.* 4: 126 (1818); *Jahrb. Gewächskunde* 1: 180 (1819); *Isis, Literr. Anzeiger* 1819: 199 (1819); Tratt., *Bot. Taschenbuch* 1: 324 (1821); Tratt., *Gen. Nov.* t. 24 (‘Joannia’, 1825), based on *Chuquiraga microphylla* Bonpl. = *C. jussieui* J.F.Gmel. (Compositae).

Note: A medicinal plant native in the Andes of Ecuador and Peru.



**Fig. 4.** *Myoporum tetrandrum* (left) engraving by Auguste Plée after Pierre-Antoine Poiteau in Labillardière, *Novae Hollandiae Plantarum specimen* 1: t. 82 ‘*Pogonia tetrandra*’ (1805); (right) engraving (reversed) by unknown artist after Plée in Trattinnick, ‘*Tabulae*’ t. ‘*Ackermannia florida*’ (?1816). Courtesy Peter Crossing Collection; photographs by Jaime Plaza.

\**Orchis richardii* Tratt., *Freye Auswahl Pflanzenabbild.* n. 517 (‘richardi’, 1816) & t. ‘*Orchis richardi*’ (?1816); *Jahrb. Gewächskunde* 1: 182 (1819); *Isis, Literr. Anzeiger* 1819: 200 (1819); Tratt., *Bot. Taschenbuch* 1: 331 (1821); Steud., *Nomencl. Bot.*, ed. 2, 2: 224 (1841) = *Dactylorhiza incarnata* (L.) Soó (Orchidaceae).

Notes: Engraving by Leopold Beyer (1789–1877) after one Weishaupt, with analysis, the same image, as ‘*Orchis incarnata*’ in Tratt., *Ausgemahlte Tafeln aus dem Archiv der Gewächskunde* 3: legends p. 27 verso, n. 268, + t. [268] (1814), with analysis and is perhaps original work. Europe. We are indebted to John Grimshaw for confirming the identity of the plant figured in the plate. The link to [L.C.M.] Richard in the specific epithet may well be that *Orchis divaricata* Rich., an unpublished name, was included in the synonymy of *O. latifolia* L. var. *angustifolia* Lois. (= *D. incarnata*) by Loiseleur-Deslongchamps, *Fl. Gallica* 2: 606 (1807), who wrote ‘An species distincta?’ referring to Richard’s collection of *D. incarnata* (P: P00852384) from Saint-Gratien, now a northern suburb of Paris; Richard’s binomial was first validated as *O. divaricata* Rich. ex Boreau, *Fl. Centre France* ed. 2: 522 (1849).

\**Primula hornemanniana* Tratt., *Ausg. Taf. Arch.* 4: 33 & t. 375 (1814), *Freye Auswahl Pflanzenabb.* n. 424 (1816) & t. 'Primula hornemanniana' (?1816) *Jahrb. Gewächskunde* 1: 183 (1819); *Isis, Littér. Anzeiger* 1819: 200 (1819); Tratt., *Bot. Taschenbuch* 1: 335 (1821) = *P. stricta* Hornem. (Primulaceae).

Notes: An Arctic plant. *Primula hornemanniana* Tratt. antedates *P. hornemanniana* Lehm. (1817), but these two are conspecific. 1814 and ?1816 images are unsigned and are perhaps original work.

*Amaryllis* × *brasiliensis* Redouté (*Amaryllidaceae*)

Trattinnick's plate of *Amaryllis* × *brasiliensis* (see above) was a copy of Pierre Joseph Redouté's, itself the iconotype of *Amaryllis* × *johnsoniana* Ker Gawl., which provides apparently the oldest available specific epithet for the name of the well-known St Joseph's Lily, widely grown in Australia and currently known as:

*Hippeastrum* × *johnsonii* (Gowen) Herb., *Amaryll.*: 142 (1837) (*Amaryllidaceae*).

\**Amaryllis* × *johnsoniana* Hort. ex Ker Gawl., *J. Sci. Arts* 1: 177 (1816); J. Murray, *Edinb. Phil. J.* 9: 241 (1823), **syn. nov.**

Type [icon] '*Amaryllis brasiliensis*' Redouté, *Liliacées* 8: t. 469 (2 Mar. 1815; non Andrews [1804 = *Hippeastrum puniceum* (Lam.) Voss]); Tratt., *Ausg. Taf. Arch.* 4: 18, t. 333a, b (1815?); Tratt., *Freye Auswahl Pflanzenabb.* n. 381 (1816), Tratt., *Jahrb. Gewächskunde* 1: 175 (1820), Tratt., *Bot. Taschenbuch* 1: 333 (1821), non Andrews (1804 = *H. puniceum* (Lam.) Voss).

*Amaryllis* × *johnsonii* Gowen, *Trans. Hort. Soc.* 4: 498 (1822); Sweet, *Hort. Brit.*: 402 (1826); Bosse, *Vollst. Handb. Blumeng.* 1: 173 (1829); Reider, *Ann. Blumist.* 5: 45 + t. [19] (1829) & *Geheim. Blum.* 3: 43 (1830); Bury, *Select. Hexandr. Pl.* 1: t. 1 (1831).

Type: ? (living plants not preserved?).

Notes: In 1822 Gowen used this name, which was current in nurseries, but could perhaps be considered an orthographic variant of the first-published *A. × johnsoniana*, though, as *A. johnsonii* was in use in horticulture before Gawler published, its having been raised by Johnson before 1810, *A. × johnsoniana* may have been a lapsus, as that rendering is not recorded as being used in nurseries. *Amaryllis* × *johnsonii* may well have been validly published in some, as yet unrecognised earlier publication, in any case, but it may be wise to conserve the spelling of the specific epithet of this horticulturally important plant in case it was not. In the absence of a specimen, Redouté's plate could be a good candidate for type material. [It is unclear whether or not Reider's publication antedates Bosse's, as both appeared in April 1829, though '*A. johnsonii*' was being used, at least in correspondence, by Bosse from at least 1825 (see *Verhandlungen des Vereins zur Beförderung des Gartenbaues* 2: 379. 1826)].

*Amaryllis* × *regina-vittata* Gowen, *Trans. Hort. Soc.* 4: 498 (1822), nom. illegit.

Note: Possibly just an indication of parentage rather than an intended alternative binomial, as *A. johnsonii* is otherwise used throughout his article.

*Amaryllis* × *carnarvoniana* DC., *Pl. Rar. Jard. Genève*: 30, t. 9 (1825); van Geel, *Sertum bot. fasc.* 14 (1829).

Lectotype [icon] **here designated** by H.W. Lack and D.J. Mabberley: Hippolyte Millenet (engraving '*Amaryllis Carnarvoniana*' after Jean Christoph Heyland), in DC., *Pl. Rar. Jard. Genève*: 30, t. 9 (1825).

Notes: Since all specimens of this hybrid cultivated in the Geneva Botanical Garden and now preserved in G were collected several years after the publication of the protologue, the plate is apparently the sole candidate for lectotype, though a monographer might choose to designate one of those G specimens as an epitype.

This, the first hybrid *Hippeastrum* ever to be synthesised, was reportedly raised in England by watchmaker Arthur Johnson, of Prescott in Lancashire (a town famed for watchmaking in the eighteenth and nineteenth centuries) before 1810 and named after him (cf. Baker, *Amaryll.* 1888: 57). It has been grown in the Royal Botanic Garden Sydney since 1828, when it was introduced by the superintendent, Charles Fraser (c. 1788–1831).

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## Endnotes

<sup>i</sup> According to James Edward Smith, champion of the Linnaean system of classification (Lady Smith, *Memoir and correspondence of the late Sir James Edward Smith, M.D.* 2: 457 (1832), “M. La Billardière has disposed his book according to the system of Linnaeus, a rare example in France, where any thing not French usually comes but ill recommended.”

<sup>ii</sup> “[HWL] I presume that the Trattinnick plates were acquired by no less than Archduke Rudolf, from 1819 archbishop of Olomouc, cardinal in Rome, friend of Beethoven and dedicatee of several of his more important works. He died in 1831 in Baden in the Eisenstädter Haus, almost certainly looked after by Anton Rollett, town physician, a relative of mine and whose visitors book has Trattinnick’s signature”.

<sup>iii</sup> Trattinnick was wont to name new genera after colleagues – in the Linnaean tradition: “According to [Linnaeus’s] *Philosophia botanica* (1751) 238. Generic names that have been formed to perpetuate the memory of a botanist who has done excellent service should be religiously preserved. This, the only and pre-eminent reward for such labour. . . .” (Freer 2003: 185). Such included *Baumgartenia* Tratt. (see above); *Brownetera* Rich. ex Tratt., Gen. Nov. Pl.: t. [14]. 1825, nom. illeg., superfl. pro *Podocarpus* Labill. = *Phyllocladus* Rich. ex Mirb. (Podocarpaceae), after Robert Brown (Mabberley & Moore 2021), *Dietrichia* Tratt. [1814] (= *Crassula*, Crassulaceae) after Friedrich Dietrich (1768–1850); Mabberley, 2020b), *Hosta* Tratt. [1812] (Asparagaceae; the only of his such names recognised today, after Nicolaus Thomas Host (1761–1834), *Lehmannia* Tratt. (1824, non Spreng., 1817 = *Nicotiana* L., Solanaceae), = *Argentina* Hill (Rosaceae), after Johann Georg Lehmann (1792–1860); *Portenschlagia* Tratt. (see above); *Roemera* Tratt. [1802], (non *Roemeria* Medik. [1792], Papaveraceae) = *Steriphoma* Spreng. (Capparaceae), after Johann Jacob Römer (1763–1819) though not indicated thus in the protologue; *Schmidtia* Tratt. [1816] = *Coleanthus* Seidl (Gramineae/Poaceae), after Franz Willibald Schmidt (1764–1796); *Ventenatia* Tratt. [1802] = *Euphorbia* L. (Euphorbiaceae) after Étienne Pierre Ventenat (1757–1808). Trattinnick himself is commemorated in *Trattinnickia* Willd. (Burseraceae [tropical South America], 1806), ‘*Trattenickia*’ Pers. (1807) being *Marshallia* Schreb. (Compositae).

