

DR. WILLIAM BALDWIN (1779-1819) AND HIS PLANT
COLLECTIONS FROM GEORGIA IN THE SMITHIAN
HERBARIUM AT THE LINNEAN SOCIETY OF LONDON

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ABSTRACT

A catalogue is given of 76 specimens of plants from Georgia, USA which were sent to Sir James Edward Smith, founder of the Linnean Society of London, in 1817, together with a brief biographical account of Dr. William Baldwin.

The Linnean Society of London recently commissioned a computerised catalogue of its Smithian Herbarium, which was amassed by its founder, Sir James Edward Smith (1759-1828). This project forms part of a scheme to make all the Society's collections, including the Linnaean Herbarium, available on the web; details of the CARLS project are on the Linnean Society's web site (see References).

Dr. William Baldwin sent a little-known set of specimens from Georgia to Sir James Smith in 1817. It is likely that Francis Boott brought these to Britain, because a collection of 185 specimens donated by Boott was acquired by Smith in the same year, and at least one of the Baldwin specimens was apparently annotated by Boott. Several of the specimens were named by reference to Pursh's *Flora Americae septentrionalis*, published in 1814. Aylmer Bourke Lambert was the vice-president of the Linnean Society of London, of which Sir James Edward Smith was president. At around the same time Lambert also acquired North American specimens collected by Baldwin, Boott, John Fraser and Thomas Nuttall (Miller 1970, p.

513). These were purchased by Edward Tuckerman, and are now in the herbarium of the Academy of Natural Sciences in Philadelphia.

Although Sir James Smith sent some duplicates to William Roscoe in Liverpool, no Baldwin specimens were found in a search of the Liverpool Botanic Garden herbarium (LIV).

Stafleu & Cowan (1976) provide the following commentary on the fate of Baldwin's herbarium collections:

“HERBARIUM and TYPES: Baldwin's collections were acquired by Lewis von Schweinitz who discarded the original labels. Von Schweinitz' herbarium is now at PH. Further specimens are at DWC, LASCA, MANCH and P-DU.”

No mention is made of the presence of Baldwin specimens at LINN, despite the fact that Smith published several new species based on these specimens. In the same year, 1817, parts 3 and 4 of the first volume of Stephen Elliott's *Sketch of the botany of South-Carolina and Georgia* were published, containing descriptions of four new species discovered by Baldwin and bearing his name as author. Three of these are represented by type specimens at LINN; the fourth, *Asclepias connivens* Baldw. cannot be matched to any of the Asclepiads in this collection.

Dr. William Baldwin (1779-1819)

Born in Newlin, Pennsylvania on March 29, 1779 to Quaker parents, Baldwin attended only one year's medical school at the University of Pennsylvania (where he first encountered William Darlington, a fellow student) before working as an assistant to Dr. William Todd. His friendship with Dr. Moses Marshall kindled an interest in botany, and two years' service as ship's surgeon on a voyage to Canton, China in 1805-06 were followed by a further year's

study at the University of Pennsylvania where he qualified as M.D. in 1807. After four years in Delaware, he moved to Georgia on health grounds and during the war of 1812 enlisted as a naval surgeon based at St. Mary's and latterly at Savannah. He began a correspondence with Stephen Elliott, author of *A sketch of the botany of South-Carolina and Georgia* which was published in 1824 and incorporated the posthumous description of several of Baldwin's discoveries. He also renewed his friendship with William Darlington, who encouraged him to prepare a catalogue of the flora of Georgia and East Florida, which latter area he had visited in the winter and spring of 1816-17.

After serving as surgeon on the frigate *Congress* on a trip to South America in 1817-1818, where he landed at Buenos Aires and other ports, Baldwin joined Major Stephen H. Long's expedition to the Rocky Mountains. Having long suffered from tuberculosis, his health deteriorated and he left the expedition, only to die in Franklin, Missouri on September 1, 1819. His unpublished work was later used by Torrey and Gray, and as previously stated his herbarium eventually came to rest in the collections of the Academy of Natural Sciences in Philadelphia. The extensive correspondence he had with Darlington is now kept in the archives of the Harvard University Herbaria (Gray Herbarium web site, see References); many of these and other letters were published by Darlington in *Reliquiae Baldwinianae* (1843). He was commemorated by Thomas Nuttall, who named the new genus *Balduina* in his honour (Nuttall 1818, vol. 2, p. 175); the included species *B. uniflora* is now placed in the genus *Endorima* Raf. Nuttall added the following footnote: "Dedicated as a just tribute of respect for the talents and industry of William Baldwin, M.D., late of Savannah in Georgia; a gentleman whose botanical zeal and knowledge has rarely been excelled in America".

The catalogue

This is arranged in alphabetical order firstly of family (in Cronquist's circumscription) and secondly of genus and species as inscribed on the sheet by Sir J.E. Smith. Other information given on the specimen label, including pencilled comments, is also recorded. Only six specimens actually bear the name of William Baldwin as collector, though we know from other evidence that each of the specimens from Georgia came from him. For example, 32 specimens are mounted on paper watermarked "J. Whatman Turkey Mills" and the date "1817." All the specimens have Georgia as provenance. Modern names, where known, are italicised; the synonymy has been derived from Small (1913, 1933) and authority for the correct modern name is usually Duncan & Kartesz (1981) except where otherwise stated.

ACANTHACEAE

Elytraria virgata Michx.
LINN-Smith no.: 46.56.
Elytraria carolinensis (J.F. Gmel.) Pers.

APIACEAE

Eryngium aromaticum nov. sp.
LINN-Smith no.: 479.22.
Eryngium aromaticum Baldw. in Elliott, Sketch, i. 344. (Oct. 1817): ISOTYPE.

Eryngium gracile [Baldw.] nov. sp.
LINN-Smith no. 479.23.
Eryngium gracile Baldw. in Elliott, Sketch, i. 345. (Oct. 1817)
Eryngium baldwinii Sprengel: ISOTYPE.
According to Nuttall (1818), vol. 1, p. 175, this plant occurred in

West Florida.

Eryngium ovalifolium Michx.

Eryngium virgatum Lam.: Pursh, Fl. Am. Sept. p. 189, no. 2

LINN-Smith no. 479.17.

Eryngium integrifolium Walters

Eryngium yuccaefolium Michx.

LINN-Smith no. 479.4.

Eryngium yuccifolium Michx.

Sium denticulatum nov. sp.

Sium denticulatum Baldwin in Elliott, Sketch, i. 354 (Oct. 1817).

Peucedanum ternatum Nuttall, Gen. N. Am. Pl. 1: 182 (July 1818).

LINN-Smith no.: 508.5.

Oxypolis ternata (Nuttall) A. Heller is the commonly cited modern name (see for example Duncan & Kartesz 1981, p. 99), but as the combination is based on an epithet published later than the one which appeared in Elliott's work it is contrary to the rules of nomenclature. A new combination was required, *Oxypolis denticulata* (Baldwin) J.R. Edmondson in Novon (2005) (basionym: *Sium denticulatum* Baldwin in Elliott, 1817).

APOCYNACEAE

Echites difformis [Walt.]

LINN-Smith no. 444.26.

Trachelospermum difforme (Walt.) A. Gray

Amsonia latifolia [Michx.]

Tabernaemontana Amsonia Aiton

LINN-Smith no. 449.20.1.

Amsonia tabernaemontana Walt.

Amsonia angustifolia [Michx.]

LINN-Smith no. 449.21.

Amsonia tabernaemontana Walt.

AQUIFOLIACEAE

Ilex angustifolia [Willd.]

Ilex cassine L. subsp. *myrtifolia* (Walt.) Sarg.

LINN-Smith no. 244.8.

Ilex myrtifolia (Walt.) Sarg.

Ilex prinoides [Aiton]

Ilex decidua Walt.?

LINN-Smith no. 244.10.

Ilex decidua Walt.

Prinos ambiguus [Michx.]

Cassine caroliniana Walt.

LINN-Smith no. 619.4.

Ilex ambigua (Michx.) Torr.

ASCLEPIADACEAE

Asclepias amplexicaulis Michx.

Fl. Bor.-Amer. 1: 115 (1803).

Pursh, Fl. Amer. Sept. 182, no. 12.

LINN-Smith no. 456.9.

Asclepias amplexicaulis Michx. (authority given as 'Sm.' in Duncan & Kartesz 1981, p. 105).

Asclepias longifolia Michx.

Pursh, Fl. Am. Sept. 183, no. 20.

LINN-Smith no. 456.12.

Asclepias longifolia Michx.

Asclepias pauperula Michx.
Pursh, Fl. Am. Sept. 182, no. 15
Asclepias cinerea Walter
LINN-Smith no. 456.8.
Asclepias cinerea Walt.

Asclepias pedicellata Walt.
Pursh, Fl. Am. Sept. p. 182, no. 16
LINN-Smith no. 456.13.
Podostigma pedicellata (Walt.) Vail. (*Asclepias pedicellata* Walt. in
Duncan & Kartesz 1981, p. 106).

Asclepias variegata Walter
Pursh, Fl. Boreali-Americ. 181, no. 10.
LINN-Smith no. 456.10.
Asclepias variegata L.

Asclepias verticillata [L.]
Pursh, Fl. Boreali-Americ. 183, no. 19.
LINN-Smith no. 456.11.
Asclepias verticillata L.

BORAGINACEAE

Batschia sp.
Anchusa hirta Muhl., Cat. [Pl. Amer. Sept.]
LINN-Smith no. 255.12.
Batschia gmelinii Michx. (not included in Duncan & Kartesz 1981).

Onosmodium hispidum Michx.
LINN-Smith no. 255.14.
Onosmodium molle Michx. var. *occidentale* (Mack.) Cockrane

Heliotropium indicum [L.]
Tiaridium indicum (L.) Lehm.
LINN-Smith no. 252.3.2.
Heliotropium indicum L.

CAMPANULACEAE

Lobelia amoena [Michx.]
LINN-Smith no. 1346.10.
Lobelia amoena Michx.

Lobelia crassiuscula Michx.
LINN-Smith no. 1346.9.
Lobelia glandulosa Walt.

Lobelia kalmii [L.]
LINN-Smith no. 1346.8.
Lobelia kalmii L. (not included in Duncan & Kartesz 1981).

Lobelia puberula [Michx.]
LINN-Smith no. 1346.11.
Lobelia puberula Michx.

CARYOPHYLLACEAE (incl. Illecebraceae)

Anychia hernarioides [Michx.]
LINN-Smith no. 155.3.
Paronychia baldwinii (Torrey & Gray) Fenzl: ISOTYPE.

CHRYSOBALANACEAE

Chrysobalanus oblongifolius [Michx.]
LINN-Smith no. 889.2.
Geobalanus oblongifolius (Michx.) Small (not included in Duncan
& Kartesz 1981).

CONVOLVULACEAE

Convolvulus repens [L.]

Convolvulus sepium (det. Hallier f., 1. XI. 1897)

LINN-Smith no. 306.12.

Calystegia sepium (L.) R.Br.

Convolvulus trichosanthes [Walt.]

Stylisma humistrata (det. Hallier f., 1. XI. 1897)

LINN-Smith no. 306.13.

Stylisma humistrata (Walt.) Chapm.

Dichondra carolinensis [Michx.]

LINN-Smith no. 477.5.

Dichondra carolinensis Michx.

ERICACEAE

Andromeda ferruginea Pursh [Fl. Amer. Sept. 292], the large var. ?

LINN-Smith no. 789.5.2.

Xolisma ferruginea (Walt.) Heller (not included in Duncan & Kartesz 1981).

Kalmia hirsuta [Pursh]

Pursh, Fl. Boreali-Americ. 295.

LINN-Smith no. 785.8.2

Kalmiella hirsuta (Walt.) Small (*Kalmia hirsuta* Walt., Duncan & Kartesz 1981).

GENTIANACEAE

Sabatia corymbosa n.sp.

Sabatia corymbosa Baldw., Sketch, i. 283. (March 1817)

LINN-Smith no. 373.2.

Sabatia corymbosa Baldw.: ISOTYPE (not included in Duncan & Kartesz 1981).

Centaurella paniculata [Michx.]

Exacum sp.

Bartonia tenella Muhl.

LINN-Smith no. 203.5.2.

Bartonia paniculata (Michx.) Muhl.

Centaurella verna [Michx,]

LINN-Smith no. 203.8.

Bartonia verna (Michx.) Muhl.

HAEMODORACEAE (incl. Melanthiaceae)

Aletris aurea Michx.

LINN-Smith no. 605.7

Lophiola aurea (Pursh) Wood

HALORAGACEAE

Proserpinaca pectinata [Lam.]

LINN-Smith no. 147a.2.

Proserpinaca pectinata Lam.

HYDROPHYLLACEAE

Hydrolea caroliniana [Michx.]

Hydrolea quadrivalvis Pursh, Fl. Boreali-Americ. 187

LINN-Smith no. 469.2.

Hydrolea quadrivalvis Walter

LAMIACEAE

Hyptis radiata [Willd.]

LINN-Smith no. 1006.2.
Hyptis alata (Raf.) Shinnars

Scutellaria lateriflora L.
LINN-Smith no. 1031.10.2
Scutellaria lateriflora L.

LENTIBULARIACEAE

Utricularia personata Lafonte [sic], recte Le Conte
LINN-Smith no. 52.24.
Utricularia juncea Vahl (fide Taylor 1989)

LILIACEAE

Trillium cernuum [L.]
Pursh, Fl. Boreali-Americ. 6.
LINN-Smith no. 640.2.1
Trillium cernuum L.

LYTHRACEAE

Ammannia humilis [Michx.]
LINN-Smith no. 222.5.1.
Ammannia latifolia L.

Lythrum lineare Michx.
Pursh, Fl. Boreali-Americ. 334.
LINN-Smith no. 869.15.
Lythrum lineare L.

MELASTOMATACEAE

Rhexia ciliata [sic, recte *ciliosa* Michx.] var. *pumila*

Rhexia ciliosa Pursh, Fl. Boreali-Americ. 258.
LINN-Smith no. 654.12.
Rhexia petiolata Walt.

Rhexia lutea [Walt.]
Pursh, Fl. Boreali-Americ. 258.
LINN-Smith no. 654.13.
Rhexia lutea Walt.

Rhexia lanceolata [Walt.]
Pursh, Fl. Boreali-Americ. 258.
LINN-Smith no. 654.14.
Rhexia mariana L.

MENISPERMACEAE

Wendlandia populifolia [Willd.]
Cocculus carolinus De Cand. Syst. v. 1, 524
LINN-Smith no. 1554.9.2.
Cocculus carolinus (L.) DC. (syn. *Epibaterium carolinum* (L.) Britton)

ONAGRACEAE

Isnardia palustris Linn.
17. *Ludwigia nitida* Michx. Does this differ from the European *Isnardia palustris*? [Baldwin's hand]. "I think not. J.E.S." [J.E. Smith's hand on Baldwin's ticket]
LINN-Smith no. 223.1.6.
Ludwigia palustris (L.) Ellis

Jussiaea grandiflora 68 [scr. ignot. on loose sheet]
Pursh, Fl. Boreali-Americ. 304.
LINN-Smith no. 777.3.2.
Jussiaea grandiflora Michx. (not included in Duncan & Kartesz)

1981).

Ludwigia glandulosa Walter
LINN-Smith no. 220.4.
Ludwigia glandulosa Walt.

Ludwigia pedunculata [last three letters amended to -osa]
Ludwigia arcuata Walt.
LINN-Smith no. 220.5.
Ludwigia pedunculosa Michx. (not included in Duncan & Kartesz
1981).

Oenothera prostrata n.sp.
LINN-Smith no. 655.15.
[non *O. prostrata* Ruiz & Pavon]
Oenothera sp. (undetermined)

Oenothera sinuata cum varietate pumila
O. sinuata Pursh, Fl. Boreali- Americ. 261.
LINN-Smith no. 655.16.
Oenothera sinuata L.

POLEMONIACEAE

Phlox subulata [L.]
LINN-Smith no. 304.12.
Phlox subulata L. (not included in Duncan & Kartesz 1981).

POLYGONACEAE

Eriogonum tomentosum [Michx.]
Pursh, Fl. Boreali- Americ. 277.
LINN-Smith no. 714.2.2.
Eriogonum tomentosum Michx.

Polygonum polygamum [Vent.]
Pursh, Fl. Am. Sept. 272.
LINN-Smith no. 698.45.
Polygonella polygama (Vent.) Engelm. & A. Gray

PRIMULACEAE

Centunculus lanceolatus Michx.
LINN-Smith no. 206.2.
Lysimachia lanceolata Walt.

RANUNCULACEAE

Ranunculus humilis Muhlenberg
Ranunculus flagelliformis Sm. in Rees, Cyclop. 29, no. 13 (1819)
LINN-Smith no. 987.27.2.
Ranunculus sect. *Batrachium*, undetermined.

RHAMNACEAE

Ceanothus microphyllus [Michx.]
LINN-Smith no. 388.7.
Ceanothus microphyllus Michx.

Rhamnus volubilis Linn., Suppl. 152.
Ziziphus volubilis
LINN-Smith no. 384.3.2.
Berchemia scandens (Hill) K. Koch

ROSACEAE

Crataegus parvifolia [Aiton] Hortus Kewensis 2: 169, 1789
Pursh, Fl. Boreali- Americ. 338, no. 9.
'eod. nomine' LINN-Smith no. 895.24.3
Crataegus parvifolia Sol. (syn. *Mespilus parvifolius* (Aiton) Dum.-

Cours.).

RUBIACEAE

Galium circaezans Michx.
LINN-Smith no. 185.75.
Galium circaezans Michx.

Houstonia patens Elliott
no. 10.
LINN-Smith no. 184.3
Houstonia crassifolia Raf.

Hedyotis glomerata, vel *Oldenlandia*
Oldenlandia glomerata Pursh
LINN-Smith no. 221.5.
Oldenlandia glomerata Michx. (not included in Duncan & Kartesz
1981).

Pinckneya [sp.] Michx.
Cinchona bracteata Brickell
LINN-Smith no. 351.2.
Pinckneya pubens Michx.

Spermacoce diodina [Michx.]
LINN-Smith no. 179.13.
Spermacoce tenuior L.

SAXIFRAGACEAE

Decumaria Barbara [L.]
2. sarmentosa
? Pursh 328.
LINN-Smith no. 859.1.2.

Decumaria barbara L.

SCROPHULARIACEAE

Micranthemum orbiculatum Michx.
LINN-Smith no. 284.15.
Micranthemum umbrosum (Walter) S.F. Blake

Gratiola acuminata Walter
LINN-Smith no. 48.1.
Mecardonia acuminata (Walter) Small, [det.] P.W.P. 1930
Mecardonia acuminata (Walter) Small

Gratiola aurea [Pursh]
LINN-Smith no. 48.5.2.
Gratiola aurea Pursh

VIOLACEAE

Viola lanceolata [L.]
LINN-Smith no. 1380.7.2.
Viola lanceolata L.

Viola primulifolia [L.]
Rees, Cycl. n. 15
LINN-Smith no. 1380.10.2.
Viola primulifolia L.

VITACEAE

Ampelopsis bipinnata [Michx.]
Vitis arborea Linn. fil.
LINN-Smith no. 418.11.2.
Ampelopsis arborea (L.) Koehne

XYRIDACEAE

Xyris brevifolia Michx.
LINN-Smith no. 102.10.
Xyris brevifolia Michx.

Xyris juncea nov. sp.
LINN-Smith no. 102.11.
Xyris juncea Baldw. ex Elliott, Sketch, i. 53(1816) non R. Brown (1810)
Xyris baldwiniana Schultes

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