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The Blodwen Lloyd Binns Bequest: three decades of major positive impacts on Glasgow Natural History Society

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ABSTRACT

The establishment of the Blodwen Lloyd Binns (BLB) Bequest in 1991 and the transformative impact of its first 20 years on the development of Glasgow Natural History Society have previously been reported. This paper describes the following decade, up to 2022. BLB's requests, including publication of a biography of John Scouler and floras of Renfrewshire and Lanarkshire have been carried out. Sadly, Peter Macpherson, author of the Lanarkshire flora, died before publication of his book. The overall capital value of the Bequest has been maintained, and supplemented in the last decade by additional legacies and donations. The income generated has been used to fund a wide variety of natural history projects: publication of *The Glasgow Naturalist* and several books, a BLB prize and lecture series, the organisation of several conferences, bursaries to help young scientists learn identification and recording skills, and funding of a wealth of public engagement and research work, including student expeditions and tools to help communities appreciate local biodiversity. Although the COVID-19 pandemic curtailed some work normally funded by the Bequest, the lack of funding applications allowed strengthening of the Bequest's capital through re-investment. The future positive impact of the Bequest on the Society's activities looks secure.

INTRODUCTION

As previously recounted by Macpherson (1992), Downie (1998) and Downie *et al.* (2012), in 1993 Professor Blodwen Lloyd Binns (BLB) left a substantial legacy (hereinafter the Bequest) to Glasgow Natural History Society (GNHS) in her will, with no conditions, but a set of suggestions on how the Society might use the money. The Society's Council established a sub-committee (hereinafter the BLB Executive), which engaged a broker to advise on investment of the legacy, and also drew up a set of uses to which the income generated could be put, with the general policy being to maintain the initial value of the Bequest (£175,000). Downie (1998) described the first five years of the Bequest, and Downie *et al.* (2012) showed how the Bequest's contributions had developed over the first 20 years. Here, we take the story further by recounting the impacts of the Bequest's third decade, including significant changes that have occurred in recent years.

Within the first 20 years, the composition of the BLB Executive and its pattern of meetings (three times each year) were established. In addition, it was agreed that several uses of the income needed no specific application to the BLB Executive. These are:

- A contribution to the social life of the Society, in accordance with one of BLB's express wishes. This includes paying for the pre-talk meal that speakers enjoy in the company of Society members.
- Support for the publication of the Society's journal *The Glasgow Naturalist* to help it achieve and maintain high-quality production standards. This includes printing and administrative costs, and the addition of DOIs to all published papers. In 1978, the new editor, Eric Curtis (Anonymous, 1977), highlighted the financial strain on a small natural history society of publishing a scientific journal on an annual basis. The problems were the rising costs of printing and the low rate of manuscript submission by members (Downie & Tait, 2001). BLB funding has solved the cost problem, and by making the journal more attractive to authors has helped with the submission issue.
- Funding for an annual prize awarded to the author of the best paper published in *The Glasgow Naturalist* by an author new to scientific writing.
- Funding for the annual BLB lecture, established in 2001.
- Funding for a joint GNHS/Biological Recording in Scotland (BRISC) bursary scheme (see section on **Recording** below).

Other uses of the income are dependent on applications to the BLB Executive, using an on-line form developed by the Executive. Following experience, the criteria and conditions for support have been refined over the years (GNHS, 2023) and currently are:

- Funds are available to individuals and groups for assistance in carrying out projects of natural history interest.
- Since a decision of January 2019, applicants must be members of the Society. Student applicants must be supported by a letter from their supervisor.

- Where a decision needs to be taken over the merits of competing applications, preference is given to local over distant projects, and to projects likely to generate future publications (either in *The Glasgow Naturalist* or elsewhere). Grants are not generally given to cover salaries.
- The Executive may make project awards of up to £2,000, but must seek the approval of GNHS Council for awards greater than £2,000.
- In addition to supporting natural history projects of Scottish interest, the Executive will consider: a) support for overseas student expeditions from west of Scotland universities (up to £1,000 per expedition); b) support for the costs of undergraduate research projects in the U.K. (up to £200 per project); c) support for overseas natural history research by individuals (up to £600); d) support for postgraduate students to report the results of their natural history research at international conferences.
- Once a project has been completed, a report should be sent to the Secretary of the Society. Reports, or summaries of them, are published in the Society's newsletter.

In the following update of the BLB Bequest's impacts, we essentially follow the order of topics covered by Downie *et al*. (2012) for ease of comparison.

UPDATE

Management of the Bequest

The Bequest's management procedures have undergone minor changes in the last few years. The BLB Executive now meets in February, May and September to fit with the financial reports provided by the Society's investment managers. The grant application form has been revised, including requiring all applicants to be Society members. The Executive is chaired by a Convenor and includes the General Secretary, Treasurer, the President (or a vice-President), scientific and financial advisers. The most momentous recent change has been the retirement of Peter Macpherson from the Executive in March, 2015. Peter had been a scientific adviser to the Bequest Executive since its inception and had been the Society's closest link to Professor Lloyd Binns (as described in Macpherson, 1992 and Downie *et al*., 2012). Sadly, Peter died, aged 89, soon after his last Executive meeting, on 24th March, 2015 (obituary: Dickson, 2017).

The Bequest's finances

Downie *et al*. (2012) detailed the changes in the market value of the Bequest's holdings over the first 20 years. The value of the original Bequest when it was first invested in 1993 was £175K. At the 2022 AGM, the value reported was £402.7K. We checked two sources of inflation estimates for the period 1993-2022. The first (Inflation Tool, 2023) gave the purchasing power of £175K in 1993 in 2022 money as £345.7K, and the second (Composite Price Index, 2023) as £456.8K. The difference results from using somewhat different criteria to calculate inflation. The fact that the reported value of the BLB Bequest's holdings falls between these two estimates suggests that the aim of maintaining the value of the Bequest has been attained, though we should add that the policy has been assisted by two factors: a) grant applications fell during the two years of the COVID-19 pandemic, allowing most of the income to be re-invested; b) the Bequest was topped up by additional income: legacies of £25K from Peter Macpherson – much of it used to fund his *Flora of Lanarkshire* and to catalogue his herbarium as described below (**Journal and other publications**), and £10.6K from Ann Christine Flum (born in Kirkintilloch, she lived most of her life in California, but retained links with Scotland, and established a trust which donated to many Scottish organisations on her death); also donations totalling £1K were received to help with publication of the *Flora of Lanarkshire*.

The total income generated by the Bequest's investments 2011-2021 was £167.8K, £15.3K per year, of which 84.6% was spent on grants and 6.1% on administration (financial managers' fees). By comparison, Downie *et al.* (2012) reported income of £226.6K over the 17 years 1994-2010, £13.3K per annum. Given inflation between these two time periods, these data suggest that the income generated now is a little less in purchasing power than in the earlier period.

The different purposes supported by grants are shown by percentage in Table 1. U.K. research and student expeditions top the list. It is good to see a substantially higher proportion of grants going to U.K. research than in the earlier period (39.8% cf. 19.8%). The proportion going to publications would be higher if the *Flora of Lanarkshire* had been included, but this was funded primarily through the Macpherson legacy.

Purpose	Percentage of total grant expenditure
Conferences	3.2
Habitat work	8.0
Training courses	5.4
Student expeditions	29.6
U.K. research	39.8
Overseas research	5.8
Publications	10.2

Table 1. Proportions of total by the BLB Bequest grant income, 2011-2022, allocated for different purposes.

Activities supported by grants

As noted above, the top categories for grant support have been U.K. research, student expeditions (below: **University of Glasgow staff-student expeditions**), publications (below: **Journal and other publications**) and habitat work. We make no attempt here to catalogue all the work supported, but instead pick out some examples to demonstrate the diversity of projects that have been made possible by BLB Bequest support.

Habitat work supported has included: pond creation by the U.K. charity Froglife; the deployment of biohavens on Hogganfield Loch by Friends of Glasgow's Local

Nature Reserves - these providing safe nesting surfaces for great crested grebe (*Podiceps cristatus*); the siting of a sand martin (*Riparia riparia*) nesting wall beside the River Kelvin at Garscube estate by the University Campus Biodiversity Group. U.K. research projects supported by the Bequest have mostly been in Scotland, but some have extended further. The Scottish projects include biodiversity surveys on Mingulay and Orkney, reptile ecology at Loch Lomond, the arachnids of the Glasgow Necropolis, and the impacts of offshore wind farms on bird migration. An unusual supported application came from a school leaver, Leif Bersweden, who wished to spend his "gap year" photographing every U.K. orchid species in flower: he later gave us a talk on the (successful) project, and wrote a book about it; he has since completed two degrees in plant science. Another unusual supported application came from a musical duo, "High Heels and Horse Hair", who were developing pieces about British wild flowers for educational performances to local schools. The Bequest has also funded natural history resources. For example, the Lochwinnoch-based charity Eadha grows tree seedlings, especially aspen (*Populus* sp.), for conservation planting; after vandals burned down their polytunnel, the Bequest helped fund a replacement. Another example has been support for the cataloguing and digitisation of the late Charles Palmar's vast collection of photographic slides, based on his field observations of Scottish birds and other wildlife.

Journal and other publications (including prizes for new authors)

The BLB Bequest has continued to be vital for the publication of the Society's journal, *The Glasgow Naturalist* (*TGN*) which has appeared annually over the last decade. *TGN* is published both online (as papers are accepted) and as hard copy once an issue is complete. Annual costs, including printing, postage and preparation are £2,000 - £3,000. In addition to standard papers, short notes and book reviews, *TGN* has published several conference proceedings (see **Conferences** below) and a set of special features on the biodiversity of Glasgow Botanic Gardens (volumes 27(1) - 6 papers; 27(3) - 8 papers; and 27(4) - 4 papers). A major advance in 2019 was registration of *TGN* to be assigned digital object identifiers (DOI) for each article, to increase visibility and online access. Older articles have also been digitised and publications since 1910 are available on the Biodiversity Heritage Library website (accessible via the GNHS website). The Bequest has also supported the production of four books in the last decade, published either by the Society or by other publishers with financial input by the Bequest. These are Nelson (2013), Watson (2013), McInerny & Minting (2016) and Macpherson (2016).

Peter Macpherson was a major contributor to *The Changing Flora of Glasgow* (Dickson *et al*., 2000), which had received substantial BLB Bequest support, and he also enthusiastically supported a BLB grant to aid the publication of *The Flora of Renfrewshire* (Watson, 2013). Peter, as plant recorder for Lanarkshire (VC77) for 35 years had been working on a Flora of Lanarkshire for decades. As the work neared completion, the BLB Executive discussed what support it could give. Peter was keen that the publication should be of a high standard, requiring substantial funding. The Executive agreed that this accorded with BLB's general wishes, and that, if necessary, some of the Bequest's capital could be used. Peter died before this decision could be put into effect, and it turned out that he had left a substantial legacy to the Society (£25,000), with the request that this be used to bring his Flora to publication and to catalogue his large herbarium so that it could become part of Glasgow Museums' collections. It turned out that there was considerable work needed to convert Peter's detailed records into text and maps. This was undertaken by Keith Watson and Peter's daughters, who had often helped with his fieldwork. Peter had arranged that Pisces Publications should be the publishers, and the book was launched at a special meeting of GNHS in the Bower (Botany) Building of the University of Glasgow in September, 2016. In April, 2017, a sessile oak (*Quercus petraea*) was planted on the University of Glasgow main campus (grassy slope on the north side) and dedicated to Peter in a ceremony attended by family members and GNHS representatives.

As reported by Downie *et al.* (2012), since 2008, a BLB prize has been awarded to the best paper published in any year's *TGN* by an author new to science writing. Since 2011, the prizes have been awarded to Jennifer Dodd for Dodd (2014), Suzanne Bairner for Bairner (2016), Martina Quaggiotto for Quaggiotto *et al*. (2017), in 2018, jointly to Lynsey Harper for Harper *et al*. (2018) and Crinan Jarrett for Jarrett *et al*. (2018), in 2019, jointly to Robyn Stewart for Stewart *et al*. (2019) and Baptiste Wijas for Wijas *et al*. (2019), Alex Fitzpatrick for Fitzpatrick *et al*. (2020), then Anna Acsai and Tamas Drexler jointly, who both contributed to Acsai *et al*. (2021). No award was made in 2022.

Conferences

Downie *et al*. (2012) noted that the organisation of conferences had been a rare activity for the Society prior to the existence of the BLB Bequest. They listed four conferences between 2001 and 2010 all with proceedings published in *TGN*. Since then, there have been four more conferences, with a further one currently being planned (Table 2). All have been organised as contributions to the annual Glasgow Science Festival which occurs in June. In addition, the 2013 conference was selected as a component of the British Ecological Society's nationwide centenary Festival of Ecology. BLB funding, along with additional grants, has allowed conference registration and light refreshments to be free to all participants. In all cases, conference proceedings have been published in *TGN* (Table 2). Conferences have been well attended and help raise the profile of the Society. Occurring late in the COVID-19 pandemic, the 2022 conference was organised as a "hybrid", with one speaker and some other participants contributing remotely, using the online platform Zoom.

Year	Conference Title	Publication of Proceedings
2013	Natives, aliens and re-introductions	*TGN* 26(1): 2014
2015	The River Kelvin: history and natural history	*TGN* 26(4): 2017
2018	The Amphibians and Reptiles of Scotland	*TGN* 27 (supplement): 2018
2022	Brownfield Biodiversity	*TGN* 28(1): 2023
2023	Amphibians and Reptiles (full title pending)	?

Table 2. Conferences supported 2012-2023 by the BLB Bequest, including issue numbers of proceedings published in *TGN*.

Recording

As mentioned above (**Journal and other publications**), recent issues of *TGN* have reported the outcome of surveys for various taxon groups in Glasgow Botanic Gardens (GBG). The most recent survey covered the years 2018-22 and was entitled "On the Wildside Revisited" as it was essentially a repeat of "On the Wildside" in the late 1990s, which had been reported in *TGN* 23 parts 3 (1998) and 4 (1999). The number of taxonomic groups and species recorded in the Gardens was greatly increased by the new surveys, and included some historical records not included in the earlier survey: the comparison between the two sets of surveys is analysed in some detail by Weddle & Downie (2021).

The records from the GBG surveys, together with those underlying the floras by Dickson *et al*. (2000) and Watson (2013), have been incorporated in the database of Glasgow Museums Biological Records Centre; it is expected that further records from Macpherson (2016) will be added in due course.

As there were fewer applications to the BLB Bequest for grants during the COVID-19 lockdowns, the committee introduced a new category: community groups were invited to apply for grants of up to £2,000 towards surveying equipment. Four groups successfully applied: Grow 73 (Rutherglen), Friends of Holmhills Community Woodland, Cashel Woodland Ecology Group and the Hamiltonhill Claypits Ecological Working Group.

We have also continued to offer four bursaries annually towards training courses in natural history field studies, as part of a scheme run jointly with BRISC (Biological Recording in Scotland). These bursaries are open to anyone living in Scotland wishing to improve their skills and contribute to biological recording. Such courses were disrupted by the lockdowns, but have otherwise all been taken up. For the 2022-23 tranche the maximum grant was increased from £300 to £400 to include a maximum of £100 towards travel expenses, in recognition of the fact that there are now fewer courses available in Scotland than elsewhere in the U.K.

University of Glasgow staff-student expeditions

As reported by Downie *et al.* (2012), a regular feature of BLB grant funding has been the support of University of Glasgow Exploration Society overseas expeditions, most of which have a natural history focus. This has continued with the welcome change that, since 2014, one expedition each year has been to a fairly remote Scottish location (so far, Islay or Harris). In the nine years 2011 to 2019, BLB supported 62 expeditions (average of 6.9 per year), with grants averaging £642. No expeditions occurred in 2020 because of the pandemic, and only two were possible in 2021 (to Iceland and Loch Sween, Scotland): thankfully, a full complement of expeditions took place in 2022. Downie *et al*. (2018) discussed the contributions these expeditions have made to natural history knowledge. Although each expedition produces a final report of their findings, and many final year undergraduate research projects are carried out on expeditions, it is a matter of some regret that the expeditions to Scottish locations have not so far resulted in any publications in *TGN*.

Blodwen's requests

Downie *et al*. (2012) provided a full list of Blodwen's requests - her suggestions for how her Bequest might be used - and reviewed progress so far. At that time, the main outstanding items were the floras of Renfrewshire and Lanarkshire, and Scouler's biography. As noted above (**Journal and other publications**), the two floras were published as Watson (2013) and Macpherson (2016). The Scouler biography was published as a supplement to *TGN* (Nelson, 2013) and launched through a lecture given by Charles Nelson on 5th June 2015. Downie *et al*. (2012) noted that Blodwen had planted a specimen of Scouler's willow (*Salix scouleri*) in the arboretum of Glasgow Botanic Gardens in 1988. The current Curator of the Gardens reports (Andrew Sinclair: pers. comm. to Roger Downie) that specimens grown from cuttings taken from the original tree have been planted in beds near the Kirklee gate and that it is planned to develop an interpretation board about Scouler in time for the bicentenary of his first voyage in 2024.

The BLB lecture series

The purpose behind this series – of providing up-to-date accounts of modern natural history delivered by prominent researchers in a manner accessible and interesting to biological science researchers and students, and to GNHS members – has continued. Eleven lectures were listed by Downie *et al.* (2012). The series has now extended to 20, and would have been 22 but for the two empty years of the COVID-19 pandemic. Lecturers and topics are listed in Table 3. Overall, the series remains light on women speakers (20%) and on botanical topics (10%). The lectures continue to be well attended both by GNHS members and University of Glasgow staff and students, and the lecturers appear to enjoy their visit and the challenge of making their science accessible.

CONCLUSIONS

GNHS has now benefitted from the income generated by the BLB Bequest for three decades. With careful management and some top-up funding, the capital value

Year	Lecturer	Title
2012	Prof. Dave Goulson	How to conserve bumblebees in the modern world
2013	Prof. James Moore	Making livings: why Darwin and Wallace's theories are worlds apart
2014	Prof. Pete Hollingsworth	Telling species apart with DNA
2015	Prof. Pat Monaghan	Long-term effects of early life conditions
2016	Prof. Mark Wilkinson	Modern natural history of naked snakes
2017	Prof. Gordon Reid	Global conservation of freshwater fishes
2018	Prof. Chris Thomas	Surviving the Anthropocene
2019/20	Dr. Andrea Graham	Natural history of immune defences in this wormy world
2020	COVID-19	
2021	COVID-19	
2022	Prof. Kevin Laland	Evolvability and the function of inheritance

Table 3. The BLB lectures, 2012-2022.

of the Bequest has kept pace with inflation, as has the income generated, more or less. The activities and projects suggested by Blodwen herself have been put into effect and completed as far as has been practicable. In this paper, we have reviewed the many ways in which the Bequest has enhanced the activities of the Society. It has been encouraging to be able to report innovations, such as the digital developments in *The Glasgow Naturalist* and we expect that the Bequest will continue to support development and innovation in the Society. Grants provided by the Bequest have helped many younger naturalists to develop their knowledge and skills, such as on University of Glasgow expeditions. However, it is a concern that the age profile of regular attenders at Society events tends to be high. For the longer term health of the Society, we need to encourage participation by younger members.

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