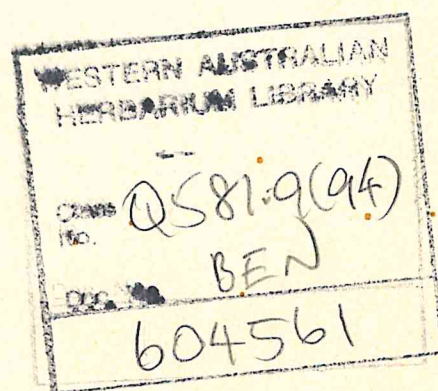


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CONCERNING HISTORY OF BENTHAM'S
"FLORA AUSTRALIENSIS"

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[Printed for Private Circulation.]

PROPOSED FLORA OF THE AUSTRALIAN COLONIES.

*Copy of a Letter from G. BENTHAM, Esq., F.L.S., to Sir W. J. HOOKER,
Director of the Royal Gardens, Kew.*

Kew, May 6th, 1861.

MY DEAR SIR WILLIAM,

It is with feelings of great regret and disappointment that I learn from you that the Lords Commissioners of the Treasury have declined sanctioning the publication of a Flora of Australia on the plan of the 'Flora Hongkongensis,' under the authority of the Colonial Office; for that "adverting to the wealth of the several Colonies in Australia, and to the sense which they have shown of the interests of science and commerce, their Lordships have stated that they think that any Works of the proposed description may be left to the enterprise of the Colonies themselves, and that there are no sufficient reasons to warrant their being undertaken at the cost of this country."

It is now several years since you did me the favour of communicating to me your ideas relative to the publication of a series of inexpensive practically useful Floras of the British Colonies in the English Language; which it was your intention to urge upon the consideration of Her Majesty's Secretary of State for the Colonies, as essential for ascertaining and developing their several productive capabilities. Your efforts having been successful with regard to the West Indian Flora, and the Cape Flora having been also commenced with liberal assistance on the part of the Cape Government, you proposed to me to undertake that of Australia, which could only be done in this country, where are deposited all the early published collections of Brown, Cunningham, Frazer, Drummond, etc.; and I then agreed with you upon the terms upon which the plan could be carried out. During the three years which have since elapsed, I have not, it is true, commenced the drawing up of the Work, which I could not do until the necessary outlay should have been officially sanctioned, but, as the project appeared to meet with the strong approval both of the Colonial Government at home and of the Governments of the several Australian Colonies, as well as of Dr. Mueller, the very able Government Botanist at Melbourne, I have kept it steadily in view in the different botanical investigations I have been engaged in, and have incidentally worked up several Australian Genera. I have made many preliminary arrangements, and, in conjunction with yourself and Dr. Hooker, I have matured the plan in all its details, and exemplified it in the Flora of the Island of Hongkong, lately published.

I have now passed my sixtieth year, and if the commencement of the Australian Flora is further delayed, I cannot hope, even should I live, to retain sufficient vigour of mind and body to complete it in a satisfactory manner. At the same time, I cannot but be aware that, having devoted nearly forty years of my life to the study of the Botany of all parts of the world, I have had great practical experience both in the preparation and use of Local Floras; that I am now established in the only centre where the vast collections made by travellers and explorers in Australia can be compared with each other, as well as with the products of other regions; that I am moreover in friendly communication with those French and German establishments which must be consulted in the course of the work; and that I

have thus acquired peculiar facilities for the preparation of a general Flora of Australia, so limited as to form and bulk, that I might still hope to bring it to a conclusion. This would also be to me a labour of love, provided I could be in some measure indemnified for the cost I should incur, and for the time I should have to take from other pursuits.

I am well aware that several of the richer colonies of Australia would prefer seeing the vegetable productions of their territories illustrated in such splendid quartos as Dr. Hooker's Flora of Tasmania, or Dr. Mueller's Flora of Victoria; but these books, though valuable monuments, testifying at once to the science of their authors and to the munificence of their promoters, take an enormous time in their preparation;—a general one for all Australia would be the work of nearly half a century. They are too bulky and costly for practical use by those who would study the comparative vegetation of the several colonies with a view to the development of their productive capabilities, or for those who, either resident or travelling in the country, may have a few leisure moments to continue the investigation of its Flora; and who require a portable and readily consultable summary of all that is known on the subject, as a starting-point for further research. The productions of adjoining Colonies are moreover so intimately connected with each other, that to answer the above purposes effectually, a general work is required, that should embrace the whole Flora of the Australian Continent and adjoining islands, but in which the typographical arrangements should be such as to show at a glance which species are peculiar to one, or common to two or more of the separate Colonies.

Such a work might be comprised in about six or seven octavo volumes, of the size and type of the 'Flora Hongkongensis,' and would probably take as many years to prepare. Were I therefore to receive, in the course of the present year, the necessary authority to commence it, I might hope to bring it to a conclusion myself; and if it were thought necessary that it should be accompanied by illustrations, fifty outline Plates might be added to each volume, without very materially increasing its bulk or price, or delaying the issue of the successive volumes.

As the necessary authority can now only be obtained from the Colonies themselves, I beg leave to submit, through you, for their consideration the following offer, being the same terms as were contemplated for a general series of Colonial Floras, as laid before the Secretary of State for the Colonies.

I am willing to prepare and publish a Flora of Australia on the plan, of the size, and in the type of my 'Flora Hongkongensis,'—distinguishing, however, the species of each of the several Colonies,—in six or seven volumes of about five hundred pages each, provided that I am guaranteed a sum of not less than £150 for each volume, to be paid on its publication, and that 100 copies be taken by the Governments at the selling price, not to exceed 20s. per volume; and that if 50 Plates be added to each volume, £50 be added for their preparation, and the selling price not to exceed 25s. per volume. This would bring the total expense to the Colonies for each volume to £250 without Plates, or £325 with Plates, and I should hope to publish one such volume every year.

I remain,

My dear Sir William,

Yours very sincerely,

GEORGE BENTHAM.

Sir William J. Hooker,
Director of the Royal Gardens, Kew,
etc. etc.

✓
Downing Street,
18th August 1858.

Sir,

I am directed
by Secretary Sir Edward
Bulwer Lytton to inform
you that, in answer to
the reference which was
made to the Lords Com-
missioners of the Treasury
on the subject of your
letter of the 1st of May,

Sir W. J. Hooker

Yr
Yr
Yr

their Lordships have intimated to this Department that they have not deemed it expedient to propose a sum for the publication of the Flora of Australia in the Estimates for the present year, but that they will be ready to consider any opinion which the Secretary of State may offer in the matter when the Estimates for the year 1859-60 are in preparation.

Sir Edward Bulwer Lytton desires me to add

that

that the subject will
not be lost sight of

I am

Sir

Your obedient servant

Camden.

Downing Street,
27th February, 1859.

Sir,

I am directed by
Secretary Sir Edward Bulwer
Lytton to acknowledge the
receipt of your letter in-
quiring whether a grant
of money could be made
for the publication of a Flora
of Australia and I am desired

Sir W. Hooker.

Lc. Lc. Lc.

to express his regret that the demands for the public service this year are so large, and that the necessity of making every possible curtailment of expenditure is so imperative, that he feels himself precluded from submitting to the Lords Commissioners of the Treasury an application for the proposed object.

I am

Sir

Your obedient servant
Ruman Meivale

the principal Floras of
Australia, and on the
probable cost of the
undertaking.

Seeing that the
Work has already been ac-
-complished for Tasmania and
New Zealand in the accounts
which were published, with
great credit to their Author
Dr. Hooker, among the
records of Sir James Ross's
Australian Voyage, His Grace
presumes that attention should
next be turned to the colonies
situated on the Mainland
of Australia, vizt. New South
Wales,

The Australian Flora will contain about 8000 species. The expenses of authorship for which, at the rate allowed for the other Floras, will amount to £1200 & the time required ^{is about} ~~cannot be less than~~ 6 years.

The whole Flora may be comprised in five 8vo volumes, about the size of the Hongkong Flora, & can be sold at the same price 16/ per volume without plates; 21/ with 50 plates.

As many more species will be contained in each volume of a large continental Flora than of a small insular one (there being ^{to the species} ~~in proportion~~ ^{very} much fewer orders & genera ^{in the former}) it is calculated that ^{about} ~~at least~~ 1600 species ~~can~~ will be contained in each volume of the Australian Flora, & as the payment proposed is at the rate of £150 per 1000 species, I would propose that the author be paid £240 ^{on} the completion & publication of each volume.

Hong Kong { 1030 species - 820 }
 1 volume { 600 Yucca 1300 } 5 volumes
 125. ... 152

Tasmanian with rest add to lower to the

Australian Flora { N.S.W. 3 - Victoria 2.
 Western 3 - T. South 2.
 W. Aust 3 -

It would take 13 volumes (at 16/oddhand plates)
 to do these Floras separately - 5 volumes to do them
 all in one work, at the same price per volume.

Downing Street,

- because the Nat. Soc. 26th February, 1861.
 an commission to add. I'll
 most of the genera, & many species

Sir,

X

As the Hong

Kong Flora is now completed,
 I am directed by the Duke
 of Newcastle to state that
 he will be glad to be
 favored with your opinion
 on the expediency, and on
 the best method, of publishing

the
 Sir William Hooker.

7/2

7/2

7/2

The Expenses therefore of the whole Flora
will be

Authorship at ~~for 8000 species at~~
~~£140 for 10000~~ for each volume
containing about 1600 species) ~~£240~~ £ 1200

Plates at 50 per volume £ 250

Number of 100 copies at 21/
per volume. £ 525

Estimated sum £ 1975

~~Without Plates Authorship £1200~~

~~Number of copies at 16/~~

~~per volume £ 400~~
~~£ 1600~~

N.B. This Flora would further contain
all the plants of ^{looks proper for} the ~~Islands~~ ^{and} ~~sent to~~
be blue coats & inland, many of which
have been for nearly 90 years collected
& are still unpublished

Joseph Banks
Esq.

Wales, Victoria, South
Australia, Western Australia
and Queensland.

It would be desirable
to form an idea of the
number of Volumes which the
Floras of these Territories
would fill if prepared in
the same style as that of
Hong Kong, and the pro-
bable cost of them, on the
assumption that with each
volume should be printed
about 50 Plates of a plain
and useful description.

In making these
inquiries, it is taken for
granted

granted that the requisite materials for the Work exist in England. If fresh collections should be necessary, this would materially affect the question.

I am desirous to request that you will have the goodness to furnish at the same time a list of any other Colonial Floras which may have been already published, or ordered for publication, together with a statement of the progress of the latter.

I am
Sir,
Your most obedient Servant
W. D. Miller

Downing Street,
24th April 1861.

Sir,

With reference to your
letter of the 28th of February last,
I am directed by the Duke of
Newcastle to acquaint you that
His Grace brought under the
notice of the Lords Commissioners of
the Treasury the considerations in
favor of publishing an Australian
Flora, in the same shape as
the

Sir William Hooker.

Yr,

Yr,

Yr,

the recently published Flora of
Hong Kong, at the expense of
this Country, but that, advertizing
to the wealth of the several
Colonies in Australia, and to the
sense which they have shown
of the interests of science and
commerce, their Lordships have
stated that they think that
any works of the proposed
description may be left to the
enterprize of the Colonies themselves,
and that there are no sufficient
reasons to warrant their being
undertaken at the cost of this
Country.

The Duke of Newcastle

does

does not feel that he would be justified in questioning the conclusion thus arrived at by the Lords Commissioners of the Treasury as the proper guardians of the Imperial Exchequer.

At some future day the several answers received from all the British colonies on their collections of Natural History, and on the extent to which they have yet been published will be carefully reviewed, and the question can then be considered whether it will be advisable to put the Australian Governments in possession of the work which

has

has been published for Hong
Kong, and to ascertain whether
they would be disposed to
authorize a similar publication
for Australia at the expense of
the Colonial Treasuries.

I am,

Sir,

Your obedient Servant

Wm. Halliday

I enclose two more plates of the flora of Victoria; the printing of the lithpress is renewed and as the completion of Victoria by my last journey may be regarded as complete & as my health is better, I hope I shall be able to progress freely with the work.

I trust Mr Deutman will take up the N. American flora of the British possessions. I do think, that it is not right, that what I have made room since 1847 a plan of life should now be the labours of an other Botanist be frustrated. Do the world not smile enough for all of us?

I often was desirous to ask Dr Hooker, whether Mount Erebus, being an active volcano, is likely to have a vegetation of any sort. Are the seeds of Pinus Douglasii readily obtainable in English parks?

Any attention shown to the
honorable Capt. Paddy will
oblige me much. This excellent
officer was severely woun-
ded in the last New Zealand
war. I owe to him mainly
my appointment as Director
of this Garden and was
installed by his Ministry.
We have several thou-
sand transplants raised
from seed, sent by his
Excellency Governor Robin-
son of Hong Kong.

Ever yours Dr. Hooker, my
kind regards.

N. C. Fragments here with.
I have five plants of
Sarcopetalum Hauriganum
in cultivation & will send
some by the first op-
portunity.

Melbourne, botan^{ic}
 & zoologic Garden
 23. July 1861

My very dear Sir William.

I have your noble letters,
 dated 18 and 25 May before
 me, accompanied by com-
 munications from your son
 & Mr Bentham. All the
 principle passages of these
 letters urging to one point,
 namely the edition of an
 Australian Flora by Mr
 Bentham under Colonial
 support, I shall address my-
 self solely to yourself, well
 knowing that the relative
 questions will be fully dis-
 cussed in your high tri-
 umvirate, whenever a decision
 shall have been arrived at
 by the Australian Government
 in reference to the subsidies
 sought for this publication.

Altho' afraid, that I shall
 merely reiterate, what I already
 stated on various occasions,
 I venture to bring once more
 my own ideas on the contem-
 plated universal Australian
 Flora before you, not with a

view to urge their adoption,
but with a sincere desire to
offer my counsels on a work,
which, — to speak with Hum-
boldt —, brings in industry.
San Vrainvillea nor in my power,
and in the issue of which
I always hoped to take a
prominent part. Indeed it
is not saying too much, that
ever since 1847 when I arrived
in Australia, I sacrificed all
other interests for the purpose
of concentrating such means,
as by endowment of nature or by
the course of events were at
my commands for the compi-
lation of an universal work on
Australian plants, for which
all I have hitherto done
must be regarded as prelimi-
nary. You are, my dear Sir
William, fully aware that I
have travelled since 1847
nearly 2000 miles by land
principally with a view to ren-
der myself acquainted with
the vegetation of this conti-
nent. I have moreover copious
as yet uncopied notes of my
diaries, which I wished to bring
to bear on the habitats of the
species, whilst in our herbarium

are amassed gradually in addition to my own through various collectors such an extensive series of specimens, that I cannot but think a work on Australia's Flora could not be satisfactorily written without direct consultation of this material. The families of Australian plants in our herbarial museum amount already to Thalamiflorae 82, Calyciflorae 240, Coralliflorae 77, Monochlamydeae 85, Monocotyledoneae 70, Arotyledoneae 35, large collections of Arotyledoneae being besides sent to European Botanists, considerable additions not yet inserted and a vast additions expected from several collectors now travelling into the interior, whilst weekly or even daily numerous collectors friends forward specimens to me.

Nevertheless it is but right I should admit, that my multifarious official duties have during the last four years left me not even leisure enough to accomplish the task of fully digesting these

collections; but since the
garage, over which I hold the
Directorship, will in the course
of this year be finally for-
med in all its parts and
since I shall moreover ere
long be relieved of the main
administration of the zoolo-
gical department, I may
hope, if providence grants
me life and health, to ad-
vance with my botanical
labours much more spe-
cifically than before, whilst I
have meanwhile put all our
huge collections into perfect
order and access and have
to such an extent augmented
my library as to enter with
fair strength on future
literary work. That my
sub^{illustration}barium is devoid of very
few species is, I think,
indisputable, and that the
series of opiorisina is
much more extensive and
scattered than in any other
barium I have reason to
believe.

Yet I am fully impressed
with the superiority of Mr
Bentham ~~of~~ ^{our} own almost

all phytographers of this age, and especially for me, who numbers little more than half the years of your celebrated friend it would be altogether unbecoming to place myself with him in equal rank, and no one can more fully appreciate the power of his genius, his assiduity and his comprehensive knowledge, of which we have again before us a remarkable example in the Hongkong Flora.

also to Henry
 & John
 late - when

}

Still persuaded by a profound desire, to see the forthcoming work perfect in all its details, as far as present discoveries go, I cannot suppress my opinion, that it is not sufficient for critical demarkation of Australian species, which after all will be the primary aim of the work, to elaborate plants of this country merely in a museum or library; and here it is, where I believe my views at the whole are least likely apt to be erroneous as regards limitation of species, having

watched the circumstances,
seeing which rule their nar-
ration, so long in the field, and

These were however not the
only ^{considerations} ~~circumstances~~, which
induced me formerly to
express a wish of sharing
in the authorship of an Aus-
tralian Flora; for I could
not but be aware, how in
my position as Botanist to the
Victorian Government the
task would devolve on me
of furnishing an Australian
Flora partial or general,
especially since I made my
office for several years past
the centre of botanical in-
formation for all Australia.

I have further in my "plants
of Victoria" and in the "fragments"
already deposited nearly com-
plete monographic essays
on certain orders, such as
Ranunculaceae, Cruciferae,
Rutaceae &c &c, whereas further
it would be, in my opinion,
hopeless to do justice to an
elaboration of such genera
as Eucalyptus, Melaleuca,
Pultenaea and others, requir-
ing careful study in the field
unless my Herbarium and its

notes would be fully available for comparison. Should Mr Bentham without this aid issue his pages, copies and supplements, if not (as even in the admirable Memoir on Loganiaceae) alterations must immediately follow, a necessity which I think might be avoided by arrangements at the outset.

I propose to sketch out a plan of operations to secure the greatest completeness of the work, you will, my dear Sir William, find me prepared to send home in integrity portion after portion of our standard herbarium as gradually required during the progress of the work, it being stipulated that the proceeds of the collection are substituted to our botanical museum, whenever the revision at Kew is accomplished. I shall also be prepared to defray the cost of transmission and remission, if Mr Bentham will undertake the clearance of the consignments to and fro at London and will always secure the collections again in metal-limbs.

carefully closed cases, when
returned. I will also in
my department ask
of a small vote, I leave
for the publication of my
works as long as Govern-
ment and Parliament
sanction the circumstance
remit £100. --- for each
volume, so that only £50. ---
from South Australia,
New South Wales and
Queensland would be requir-
ed respectively, a contribu-
tion fair in proportion
to our population; and should
the grants for my works be
discontinued I will save
the above specified sum
out of my salary annually
for the purpose. I will
further arrange, that as
far as possible diagnoses,
notes on the range of spe-
cies, on variation &c. and
figures either in prints,
or in manuscript along
with the specimens &c. be
transmitted, establishing
myself no further claims
on the authorship of the
flora, than some such as
by mutual concession is to
justly held by Sir Hooker to

wards the Ceylon Flora,
a claim which you feel is
due to me in the official
capacity I hold and under
the consideration that not
likely any other collections
placed at Mr Bentham's
disposal are to the same
extent elaborated.

Mr Bentham thinks to
embody not only all Tha-
lamiflorae but also the
Leguminosae in the first
volume, whilst probably
the former will occupy
alone ^{more than} ~~50~~ the allotted
500 pages and Charal.,
I think, he held in a
volume separate as a
distinct division of the
empire of plants. It appears
to me also advantageous
to sift from descriptive de-
scriptions notes relative
to measurements and other
characters subject to wide
fluctuations, nor can I
recommend as long as ^{we} ~~the~~
aim to produce an inex-
pensive and portable work,
that it should be encum-
bered with lithographies,

particularly if these are
not for the guidance of
students accompanied
by analytical details.
On the other hand I be-
lieve an argumentation
of the work by quotations
not merely of authors
of species and genera,
but also of the original
citats of their respective
writing would be of
great instruction.

With sentiments of the
deepest veneration, I
remain, my dear Sir
William, your humble
and attached

Jos. Muellw.

Sir Will. Jackson Hooker,
R.H., Kn. Leg. Hon., D.C.L.
L.L.D., F.R.S., F.R.S.
L.S.

Melbourne has & you.
Garden, 24. Dec. 1861

My dear and venerable Sir

Your kind letter, dated 15 Oct,
has been to me the source of
very great gratification and I
feel thankful and proud for
your having generously acceded
to my proposition and allotted
to me a share in the work
on Australian plants. My
own position in the great
undertaking I beg you will
admit as a very subordinate
one, and it appears to me
that you have in the proper
title been given more to me
as is due. If you will kindly
allow me to suggest some
slight alterations it would
be to substitute the classically
correct and more ^{perhaps more explicit} geographically
appropriate name *Flores Au-
stralianae* to say Australian
territory ^{instead of colonies} (instead of colonies,
as much of the north, from
whence we have rich collections
will not be colonized for a good
while. Further perhaps you would
say with assistance of notes (only)
as many of the ^{my} descriptions are
already published in some work
as the other. I have further to

bring under your notice
that I have been surrounded
with the presidency of the
Royal Society of Victoria
by his Excellency Sir Henry
Barkly & that whilst elected
vice president of the acclima-
tion society I have ceased
to be Director of the zoology
Garden, a new & more extensive
and having been found for
the zoology establishment
in an other part of our environs.
Being thus relieved of a very
onerous part of my duties
I shall now much more
be able to give my literary work
so soon as the estimates
are passed, I shall not
fail to remit the £100
for the first volume of the
work. Immediately after
the arrival of your letter
I packed up 27 ~~for~~ ^{for} proofs
of Thalassiflorae, comprising
the apparatus & the various
sections, the examination
of which will probably occupy
one month, as it will be a
difficult task even to a highly
experienced & acute sighted
logist as yourself, & to limit

the species so as to arrive
 at cardinal characters, which
 will stand the test in the
 Australian field. I found it
~~the~~ very tedious ^{work} to
 arrive at the limitations ^{of the}
 in the plants indigenous to Victoria.
 Note I have not yet
 included this time, as I
 am anxious to send yet this
 week the herbarium off;
 moreover there is little
 to add to what I published
 in the plants of Victoria
 & in the fragments regarding
 the appearance & character
 of the second vol. of the frag-
 ments ^{the} ~~only~~ is sent to Sir
 Wm. Hooker by this mail. If
 you would favor me with the
 prospectus of the flora
 as they come out, I will
 gladly add them notes, which
 would arrive in time for
 supplementary pages of the
 volume. The time I send
 only a new definition of the
 genus *Wilkiea*, also description
 of the rare *Lepididium Crangula-*
phyllum. In the later fascicles
 such as *Sapindaceae*, I
 shall be called on to give
 more notes. The habitats
 will very well be elicited
 from the herbarium & the
 work on Victorian plants

But in the instance, where
neither of the two furnish
them, I shall quickly exam-
ine the range of distribu-
tion.

In working the *Cyperium*
I have placed the plants
together as near as I can
saw them related. ^{without always coming into their careful analysis.} It will
be for you to decide whether
for instance *Bibb. virgata*,
puberula & *angustifolia* (altho' these I did analyze,
could form species or varieties.
The *Canadenses* require a
careful sifting, analyzing
& rearranging. The genus is
quite wretched! I hope
it will finally fall to our
share to erect a permanent
botanical genus as a monu-
ment of the great Canadensis,
and that the grandeur of
the plant will be commensurate
with the greatness
of such a man. — You state that
no varieties have been received
to *Cochloospermum*. *C. testaceo-*
num will probably be *C.*
Fragari of Blanchon, but the
C. Gregorii is surely distinct
& not the same as *C. Gossypium*
you find it described in the fragments
of *Menispermum* we have
C. Australian *quirit*.

You may probably find it
 useful to consult my
 manuscripts lodged at
 Kew, altho some portions
 become annulled by later
 investigations & some have
 become obsolete. But what
 I would most imploringly
 solicit from you, is not
to admit any synonyms
except such as by the
publication of diagnoses
cannot be excluded. Altho
^{preliminary} a name may ^{have} appeared in print
 in my reports, ^{letters} yet such a
 name has no claim to be
 promulgated, as in most
 instances it has been cor-
 rected by my own later
 investigations. I should for
 instance be sorry to see
Cocculus Brookeri appear
 as synonym in the new
 work. When writing to
 Sir William Brooker on
 that plant, I can only print,
 but no owner got I of the
 name flowering, I had no
 cause no difficulty in
 referring it to *Seplaria*.
 Will do our noble friend
 Harvey express himself

on this subject, when
referring to the host of
names for *Polynaria* he
says: "names ignoble
born to be forgot" —

That *Polynaria Patheronis*
is now added to the South
Australian flora, which
as a Norfolk island plant
it could not be counted,
will interest you, as it adds
a group of great beauty
and sharp distinction.

I think I could aid a
little in your ground plan
herbarium, if I had the proof
sheet.

You may expect every
month a similar campaign
unlike that that now can
be waged; but I do not
think you will be able to
place more than *Thalassia*
flora into the first volume.

I can assure you, that I
look forward with the
greatest pleasure to the
long regular & continued
correspondence which
will be caused by my being
called to the honorable po-
sition of aiding you; and I

hope, that you will unhesi-
tatingly instruct me on
all occasions, how I can
best serve your purpose.
If any particular work
requiring much field study
is desired by you & be
worked up by myself &
you will point out, which,
it will be gladly undertaken.
Under all circumstances
I will endeavor to remain
with fragments & plants
of Victoria about, thus
to facilitate your work.

With sentiments
of the highest regards,

dear Sir,

Yours

Geo Mueller

Geo. Bentham Esq.
President of the Linnean
Society

First consignment of herbaria
to Sir Will. Hooker for Mr
Bentham's personal, to be
forwarded probably this week
per "Young Australian", otherwise
by the next Clipper. Will
of loading will be sent as well
with the ship taking the
consignment, as also by the
next mail. The box is lined
with metal foil and the
cotton seal impressed on it.

Ranunculaceae: Clematis, Jacarilla	2
Ranunculus	2
Anemone, Caltha, Myosurus	1
Labombeae	1
Magnoliaceae	1
Anonaceae	1
Monimieae	2
Dilleniaceae, Kunzia, Nuttallia &	1
Hibbertia (Cylandra)	4
Hibbertia (Pleurandra)	4
Menispermaceae	1
Papaveraceae	1
Capparidaceae	3
Cruciferae	3
Total 27.	

24/12/61

J. M. M. M. M.

Downing Street
28th December 1861

Sir

I am directed by the Duke of Newcastle to transmit to you, for your information, the enclosed copy of a despatch from the Governor of Queensland, on the subject of a proposal which he had received through you from Mr Bentham, for the publication of an Australian Flora on a plan similar to that of the Flora of Hong Kong.

I am

Sir

your obedient servant

F. Smith

Mr William Hooker

— — —

2-30th of July 1861

Governor Sir G. Bowen. to the R. Newcastle,

65

Copy.

No 40.

Government House.

Brisbane Queensland,

30th July, 1861,

My Lord Duke

I have the honor to report that I received by the last mail a letter from Sir William Hooker, containing a proposal from Mr Bentham for the publication of a Flora of Australia on a plan similar to that of the "Flora Hongkongensis" lately published by that Gentleman under the authority of the Colonial Office.

2. It appears from
Mr. Bentham's Circular that
the Lords Commissioners of the
Treasury "adverting to the wealth
"of the several Colonies in Australia
"and to the sense which they
"have shown of the interests
"of Science and Commerce, have
"stated that they think that
"any works of the proposed
"description may be left to
"the enterprise of the Colonies
"themselves, and that there
"are no sufficient reasons
"to warrant their being
"undertaken at the cost of
"this Country", - i.e. of the

Imperial

Imperial Treasury.

3. I have recommended the proposed undertaking to the favorable consideration of my Government; and by the enclosed minute of Council it will be seen that Queensland will be ready to bear its fair proportion of the expense if the other Australian Colonies should also be found willing to cooperate.

4. In my reply to Sir William Hooker's letter, I have suggested that he should formally ascertain through the Secretary of State if the other

Australian

Australian Colonies are prepared
to give their co-operation to
so desirable an object. I
have no doubt that they
will be found willing

I have &c.

(S^c) G. F. Bowen.

P.S. Since the above despatch
was written, I have been
informed that Victoria, New
South Wales, and South Australia,
will join Queensland in
guaranteeing the required sum
of £250 per Volume. Sir John
Young and Sir Henry Parkes
think, and I quite agree with
them

them that Mr. Bentham should
avail himself of the cooperation
of Dr. Mueller the Government
Botanist of Victoria.

(S^e) G. F. B.

Extract from the minutes of
Proceedings of the Executive
Council of Queensland on
the 29th July 1861.

Present

His Excellency The Governor,
The Hon^{ble} The Vice President,
The Hon^{ble} The Attorney General,
The Hon^{ble} The Colonial Treasurer.

His Excellency the Governor
lays before the Council a letter
received from Sir William Hooker
Director of the Royal Gardens
at Kew, enclosing a letter to
himself.

Extract from the minutes of
 Proceedings of the Executive
 Council of Zanzibar on
 the 29th July 1861.

Present

His Excellency The Governor,
 The Hon^{ble} The Vice President,
 The Hon^{ble} The Attorney General,
 The Hon^{ble} The Colonial Treasurer,

His Excellency the Governor
 lays before the Council a letter
 received from Sir William Hooker
 Director of the Royal Gardens
 at Kew, enclosing a letter to
 himself

himself from Mr. George Bentham
in which certain proposals
are made for the publication
of a work on the general
Flora of Australia. Sir L.
Hooker urges the importance
of the matter, and seeks the
co-operation of the Australian
Colonies in order that the
intending Publisher, Mr. Bentham,
may be suitably remunerated
for a labour that will extend
over several years.

The propositions to be
considered are as follows.

Mr. Bentham is prepared to
publish the work ~~in question~~,

in

in question in Six or Seven
 Volumes. He previously requires;
 a general guarantee of One
 hundred and fifty Pounds for
 each Volume as published, to
 meet the expense of Computation
 and publishing, - he further
 requires that each of the
 Australian Colonies shall
 undertake to purchase one
 hundred Copies of the entire
 work at the price of Twenty
 Shillings per Volume, if without
 plates, and Twenty five Shillings
 with plates. The cost to
 each Colony to be £250 or £325,
 for each Volume, as it may

be

be published with or without
Plates.

The Council deliberate,
convinced that the publication
of such a work as the one
under consideration would be
a valuable and important
addition to Botanical Literature,
and one of peculiar interest
to the Australian Colonies,
they think it would be very
desirable that this Colony should
co-operate with the neighbouring
Governments, in promoting
its publication; and they
request that His Excellency
in replying to the letter of

Sir

Sir William Hooker, will
 notify the readiness of this
 Government to recommend
 the Queensland Parliament
 to undertake its share of
 the guarantee and to purchase
 the required number of copies
 of the complete work, when=
 =ever Sir William Hooker
 shall inform His Excellency
 the Governor that the other
 Australian Colonies of New
 South Wales, Victoria, South
 Australia, Tasmania, Western
 Australia, and New Zealand
 are also ready to co-operate,

(Sd) A. W. Clanning
 Clerk of the Council,

Downing Street
16th January 1862

Sir

I am directed by the Duke of Newcastle to acknowledge the receipt of your letter of the 7th instant upon the subject of the publication of an Australian Flora.

With regard to Western Australia I am desired to state that as this matter has been settled by direct correspondence between yourself and the Governors of the several Australian Colonies, it would probably be advisable for you to address yourself to Mr. Hampton, who has lately been appointed Governor of that Colony.

I am, Sir,

your obedient servant
Richard D. Rogers

William Hooker
u u u

No 37
386.

Colonial Secretary's Office

Perth. 21st March 1862.

Sir

I have the honor to acknowledge
the receipt of your letter of the 26th January
last, relative to the publication of a
 flora of Australia, and am
directed by His Excellency Governor
Hampton to inform you in reply that
the Government of this Colony is not
in a position, either financially or
otherwise, to grant such a guarantee
as that described in the last

William J. Hooker

Director of the Royal Gardens
Kew

paragraph

55
paragraph of the printed paper, which
accompanied your letter. It will,
however, always give this Government
much pleasure to afford you such
information or assistance as may be
within its power.

I am the honor to be

Sir

Your most obedient servant

Frederick Paulsen

Memorandum of an Agreement
made this 25th day of October, One
thousand eight hundred and sixty
two, Between George Bentham Esq^r
of the one part and Mess^{rs} Lovell Reeve & Co^s
Publishers of the other part.

The said George Bentham having a work in
preparation to be entitled "Flora Australiensis",
hereby agrees to give to the said Lovell Reeve & Co^s
the exclusive right of printing and publishing
at their own expence and risk and for their
own profit an Edition of Five hundred
Copies of the said work.

And it is understood by the said Lovell Reeve & Co^s
on entering upon this Agreement that One
hundred Copies of the said work will be
purchased by Her Majesty's Australian
Colonial Government immediately
on its publication at the full retail
price such price being according to
the number of pages fixed at the rate

of 20/- per 600 pages.

The Author to be entrusted to purchase
any further number of Copies at the
trade price

Lovell Ruse & Co.

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N^o 63/51.

Colonial Secretary's Office,
 Sydney, New South Wales.
 20th May 1863.

Sir

A proposal by George Bentham Esq, F. L. S. for the preparation and publication of a cheap and useful work descriptive of the Flora of Australia, has been brought under the notice of this Government as explained in the enclosed copy of a minute of the Executive Council.

2. You will observe that a contribution at the rate of Fifty pounds per annum has been promised for seven years from New South Wales; and as it appears by a communication received by His Excellency the Governor from Sir William Hooker that some progress has been made in the work I transmit to you a letter of credit for the sum of fifty pounds as

£50
 Edward Hamilton Esq

Resident Agent for the Colony of
 New South Wales.

as the first payment from this colony to
Mr. Bentham.

3. The payment should be made
through or under the sanction of Sir William
Hooker.

I have the honor to be,

Sir
Your most obedient Servant

(Signed) Charles Cowper.

✓

REVIEW.

FLORA AUSTRALIENSIS: a description of the Plants of the Australian Territory. By GEORGE BENTHAM, F.R.S., F.L.S., assisted by FERDINAND MUELLER, M.D., F.R.S. and L.S., Government Botanist, Melbourne, Victoria. Vol. 1. *Ranunculacea to Anacardiacea*. Published under the authority of the several Governments of the Australian Colonies. London: Lovell, Reeve, and Co., 5, Henrietta-street, Covent Garden. 1863. pp. 508.

This work, now in the course of publication under the direction of the venerable President of the Linnean Society, assisted by the Government Botanist at Melbourne, is one of a series of Colonial Floras, the preparation of which is mainly owing to the unceasing exertions of Sir William Jackson Hooker, R.H., &c., Director of the Royal Gardens, Kew. In the Preface to the "Flora Capensis," the first volume of which was published in 1860, Harvey and Sonder—the authors of that work—observe that "first, and specially, they are most deeply indebted to Sir William Hooker, not only for throwing open to them, in the freest manner, the unrivalled Kew Herbarium but also for the great interest he has from the commencement shown in their undertaking. To him primarily it is due that the work was set on foot. He it was who suggested it, and assisted in devising the plan on which it should be moulded; he also introduced the authors to many valued South African correspondents ; and, lastly, his strong recommendation of the undertaking to Sir George Grey was mainly instrumental in obtaining the grant from the Colonial Parliament." To the same patronage, and that of his learned brother, Dr. Hooker, we are principally indebted for the "*Flora Hongkongensis*," or a description of the flowering plants and ferns of the Island of Hongkong, which was published by Mr. Bentham in 1861, under the authority of her Majesty's Secretary of State for the Colonies. And now again in the preface to the volume before us, the same writer remarks:—"The chief foundation of the work may be said to be the vast herbarium of Sir William Hooker." Having, therefore, duly acknowledged his obligations to Sir William, Mr. Bentham refers to the co-operation of Dr. Hooker, and his valuable essay on the Flora of Australia, prefixed to his work on the Flora of Tasmania; but he justly regards the herbarium of the late Robert Brown, which is deposited in the British Museum, as "the main foundation of our knowledge of Australian vegetation." This extraordinary man, whom the illustrious Humboldt designates *Botanicorum facile Princeps*, accompanied Flinders on his survey of the Australian Coasts, and on his return to England in 1805, took with him nearly 4000 species of plants, and "an inexhaustible store of new ideas in relation to the characters, distribution, and affinities of the singular vegetation which distinguishes the great continent of Australia from every other botanical region." To the indefatigable zeal and sound judgment of Dr. Brown, Mr. Bentham bears willing testimony, and affirms that in his herbarium, in most cases, several of each species may be still seen in an excellent state of preservation, with detailed descriptive notes. Mr. Bentham also inspected several of the original specimens of Banks and Solander, some of which were gathered more than ninety years since, and have never yet been published; but, whilst he expresses his belief that, from various sources, he has had opportunities of examining most of the late A. Cunningham's plants, it is painful to find that the labours of that meritorious botanist, whose memory is still fondly cherished by many in these colonies, have not been duly appreciated, for Mr. Bentham remarks, "The rich herbaria collected at the public expense by the late A. Cunningham in his various expeditions under Captain King and Captain Stokes, and many others, either presented to the Museum or purchased out of the annual grants, have been stored away, many of them from a quarter to half a century, unarranged in their original parcels, without any thought of providing the staff and funds necessary to render them of use to scientific botanists." After mentioning the assistance he had derived from Dr. Lindley in reference to the collections of plants made by the late Sir Thomas Mitchell in his various expeditions, as well as those in Lindley's own herbarium, Mr. Bentham alludes to the information he had acquired in Paris and Vienna respecting the herbarium of Labillardiere and Bauer; and then he proceeds to enumerate the essential assistance he had experienced from the co-operation of Dr. Ferdinand Mueller, the distinguished Government Botanist of Victoria. Dr. Mueller's unwearied industry in the pursuit of science is too well known in these colonies to require any laboured panegyric from us. His three volumes of "*Fragmenta Phytographia Australiae*," as well as his splendid work on "*The Plants indigenous to the colony of Victoria*," and numerous papers on scientific subjects published from time to time, afford abundant evidence of his pre-eminent ability and unceasing devotion to science. It is pleasing, however, to find that the Doctor's exertions are so highly appreciated by men of science in Europe, and that a man so illustrious as the President of the Linnean Society can allude to his co-operation in such terms as these:—"When, indeed, it was first contemplated to bring out a general Flora of Australia under Government sanction, Dr.

Mueller was naturally looked to as the botanist best qualified for undertaking the task of preparing it; and in the hope that it would be entrusted to him, he had devoted his utmost energies to collecting the necessary materials. But there was one indispensable step, the examination of European herbaria where the published types were deposited, which he was unable to take; and it is a signal proof of the generosity of his disposition and the absence of all selfishness, that when it was proposed to him that the preparation of the Flora should be confided to me, on account of the facilities which my position here gave me for the examination of the Australian collections I have mentioned above, he not only gave up his long cherished projects in my favour, but promised to do all in his power to assist me,—a promise which he has fulfilled with the most perfect faith. A joint work was at first thought of, but independently of the ordinary drawbacks attending on joint works, the distance which separates us, requiring four months to obtain an answer to every trivial doubt or query, put this quite out of the question. I alone am therefore responsible for the details of this work, for the limitation given to genera and species, for their characters and descriptions. But important observations have been frequently suggested by the published works of Dr. Mueller, or by his manuscript notes, which he has freely communicated; and a still more essential and generous contribution to the work has been the loan of the very rich herbarium he had amassed for the Australian Flora, which he remits to me in instalments." Here, then, we see the relative position of the two botanists associated together in the great work of describing the Flora of Australia; and it cannot but be a matter of congratulation to every one who has reflected on the subject, that whilst the one has the advantage of examining the herbaria of preceding botanists, and comparing specimens forwarded to Europe from all the known parts of this vast continent, the other has an opportunity of noticing, in a living state, many of those plants which cannot be satisfactorily described from dried specimens, and of preventing the multiplication of species from a want of studying the variations of a plant arising from local causes. In the volume before us, some instances may be cited, in which a question arises as to the comparative value of European Herbaria and local experience; and probably, as the work advances, the inquiry may assume even greater importance, especially when the genus *Eucalyptus*, which has hitherto been a stumbling-block to most botanists, comes under consideration. As far as the work has proceeded, every care has been taken to secure accurate information, and whilst the collections of recent explorers in Australia have been examined with the strictest attention, even the humble collections of an amateur are duly acknowledged: Thus, for instance, the labours of Drummond, Eabage, Gregory, Fitzalan, Stuart, Walcott, Brown, Landsborough, Leichhardt, Beckler, and Oldfield (who by the way is now in England, and has most generously offered the use of his own Australian Herbarium to the Kew Museum), are honourably recorded; and especial reference is made to those persons residing in Australia, who, "owing to the greater facilities for drying and preserving enjoyed by stationary collectors, are usually the most satisfactory to the working botanists." "The first of them in importance," writes Mr. Bentham, "are the collections of Mr. C. Moore, Superintendent of the Botanic Garden at Sydney, and Mr. W. Hill, Superintendent of the Botanic Garden at Brisbane; the former chiefly from the northern districts of New South Wales, and the latter from the vicinity of Moreton Bay. Amongst the amateur contributions, I notice those of Mr. W. Allitt, from Portland; of Miss Louisa Atkinson, from the Blue Mountains; of Dr. H. Behr, from South Australia; of Mr. E. Bowman, from Queensland; of Mr. J. Nernst, from Ipswich; of Mr. A. Thozet, from Queensland; of Mr. W. Vernon, from Sydney; of the Rev. W. Whan, from Shipton; of Mr. C. Wilhelmi, from Port Lincoln; of the Rev. S. E. Woods, from the Tattiarra Country; and of Mr. W. Woolls, from Parramatta." Should any names be inadvertently omitted, Mr. Bentham proposes to make amends by giving, with the last volume, an alphabetical list of all those who have contributed, either directly

or indirectly, to his great work, "with a sketch of their labours!"

With regard to the form and language adopted in the present work, Mr. Bentham has followed the system sanctioned by Sir W. Hooker for colonial floras in general. In the first place he has prefixed to his work, by way of an introduction to the study of Australian Botany, an elaborate outline of the definitions now usually adopted by scientific botanists, so that no one in reading the work may mistake the author's meaning. This is not only in accordance with the caution of the great orator of antiquity, "that every clear and rational discourse upon any subject ought first to begin with an explication of that subject;" but it is what common sense dictates; for, as the book may fall into the hands of many persons unaccustomed to scientific language, some explanation seems absolutely necessary in order fully to understand the writer. The "*Flora Australiensis*" is composed in the vulgar tongue, and therefore not intended exclusively for the learned; consequently, we regard the introductory

chapter as highly important, and recommend it to the study of all who are desirous of attaining a sound knowledge of the subject. There are, indeed, excellent works on the elements of botany, which are well known to the botanical student: but as these cannot always be procured in a distant colony, and even if they can, are not sometimes within reach when most required, Mr. Bentham has rendered an essential service by compressing into a small compass all that is necessary for the guidance of those who wish to comprehend the terms he employs. Proceeding to the consideration of systematic Botany, Mr. Bentham gives the following definition of the word *species*: "A species comprises all the individual plants which resemble each other sufficiently to make us conclude that they are all, or may have been all, descended from a common parent. These individuals may often differ from each other in many striking particulars, such as the colour of the flower, size of the leaf, &c., but these particulars are such as experience teaches us are liable to vary in the seedlings raised from one individual."—From the time of Linnæus to the commencement of the present century, it seemed a sufficient definition of the term *species* to say, that a "*species* consisted of individuals all resembling each other, and reproducing their like by generation," but in the progress of science it has been found necessary to define the term with greater accuracy, for it is admitted that "*varieties*" not merely resembled each other, but sometimes come true from seed. It would be out of place on the present occasion to open up the abstruse question on the origin of species, which has of late been agitated by men of such ability as Darwin and Lyell, for the popular definitions of Mr. Bentham seem quite sufficient for the work before him, and are generally admitted by the scientific world; but until further progress has been made in this most interesting but difficult subject, much obscurity will continue to rest on the terms "*species*" and "*variety*;" and whilst some botanists regard a plant as "*a true species*," others will pronounce it "*a mere variety*." Indeed, in the very book before us, Mr. Bentham candidly admits, "*many of the varieties which I have indicated will be considered as distinct species by a large number of general botanists*;" on the other hand, there are many forms which I have adopted as species which Dr. Mueller is disposed to reduce." There is certainly great difficulty in this matter, but probably the obscurity arises from the imperfection of our knowledge, and especially from not taking into consideration the amount of variation to which true species are capable. And here it must be observed that, so far as Australian botany is concerned in this question, Dr. Mueller's assistance must prove invaluable to Mr. Bentham, for the Doctor has the great advantage of observing many plants living in their native stations, and of noticing the variations to which they are subject. Mr. Bentham remarks, "*In some cases I have yielded to his opinion, rather against the conclusion I should have come to from the examination of dried specimens*;" and again, after adverting to the variation of species, he proceeds to say, "*little as we know, for instance, of the influence of natural hybridizing in Europe, it has been still less, if ever, observed in Australia*;" and many other causes may have produced apparent passages between species really distinct. I have, therefore, wherever there is a difference of opinion between Dr. Mueller and myself, adopted the conclusion which has appeared to me most probable, and mentioned the objection to it for the consideration, and, if possible, the decision of future botanists." There appear, also, some differences of opinion as to the limitation of genera, some of which the Doctor would combine, as for instance, amongst the *Rutaceæ*, he regards *Zieria* as a section of the genus *Boronia*; and, again, he proposes to consider *Phœbalium*, *Philotheca*, *Croceola*, &c., as mere sections of the genus *Eriostemon*. This, however, is a question of arrangement, and perhaps may possess some advantages in assisting the memory, but so far as regards the merit and utility of Mr. Bentham's book, they are not affected by it. Mr. Bentham's chapter on "*Vegetable Anatomy and Physiology*," as also that on the "*Collection, Preservation, and Determination of Plants*," contains much useful information, and some sound practical hints for collectors of specimens, but in order to appreciate them they must be read and studied attentively. Proceeding to the great orders of Plants described in the *Flora Australiensis*, we find that thirty-nine are described, viz., from the *Ranunculaceæ* to the *Anacardiaceæ*. These are what botanists term *Dicotyledons*, and this division comprises all Australian trees and shrubs, except palms, a few ferns and bamboos, and a few others with linear grass-like leaves. In the arrangement of the orders great judgment is displayed, as well as a most extensive knowledge of the vegetable kingdom; but the characters given are not to be regarded as absolute, nor without exception, and they are inserted for the purpose of calling attention to one or two of the most striking or most important features of each order. In his descriptions, Mr. Bentham has studied brevity without exposing himself to the charge of being obscure, but owing to his anxiety to bring out the first volume of his work with as little delay as possible, he was compelled to send it to the press without inserting some additional information he had received from Australia at the eleventh hour. This he proposes to work up in the shape of "*addenda and corrigenda*" in a supplement to be issued with the second volume, when it is presumed he will correct also some trifling errors in the names of persons and places which have accidentally crept into the book. It

would be well, likewise, to give the correct habitat of plants, so far as it can be ascertained, for some are by no means so limited in their range as would appear. Thus, for instance, *Correa alba*, which is common about Port Jackson, is described as occurring in Victoria, Tasmania, and South Australia. *Hibbertia dentata* is said to grow in woods and stoney places near the sea—Port Jackson—whereas it is also found on the banks of creeks some distance inland. *Cardamine stylosa* is given to Mount Lindsay, although it is met with in many parts of this colony, &c., &c. These and other such omissions are little matters which admit of easy correction, and probably are amongst the "*addenda and corrigenda*" alluded to above. It may perhaps be deemed too trifling to mention some other inaccuracies, but should another edition of the first volume be called for, it would be as well to substitute Sir Thomas Mitchell (p. 9) for Sir William Mitchell, and the colony of "New South Wales" for that of "Port Jackson" (p. 54.) Some persons have also suggested that the title of the book should be "*Flora Australica*," instead of "*Flora Australiensis*," as the former is deemed more classical. Whatever opinions we may entertain on this question, we would rather take a comprehensive view of the whole work, and exclaim with the exquisite critic—

Non ego faucis
Offendar maculis, quas aut incuria fudit,
Aut humana parum cavit natura!

Considered as a whole, the first volume of our *Flora* is, indeed, highly creditable to the distinguished President of the Linnæan Society, and his learned assistant, and the circulation of it throughout the civilised world will do much to develop the vegetable resources of this vast continent. We cannot, therefore, but congratulate our fellow-colonists on the commencement of so valuable a work, and we trust that by the blessing of God the same illustrious individuals who have made so auspicious a beginning of the "*Flora Australiensis*," may be permitted to bring it to a satisfactory termination. Much remains, however, to be accomplished; but with the assistance of the British and Australian Governments—which are pledged to give pecuniary aid towards defraying the expenses of the publication. We hope that nothing may occur to prevent the fulfilment of the original plan. Of late years the study of the vegetable kingdom has been pursued with a degree of zeal and success unknown in former ages, but still the sale of works purely scientific is so limited that they can seldom be said to pay their expenses. Professor Harvey, who has just completed his splendid work on Australian Algae, could scarcely have carried on his labours without the assistance of the University of Dublin and of the Royal Dublin Society. The colonial public, for whose use it was especially designed, have contributed but little towards the expenses in the purchase of copies, although one would imagine that few persons fond of natural history, and residing near the sea-coast, would deny themselves the pleasure of possessing so elegant a work. Dr. Harvey seems to have anticipated something of the kind, for he remarks:—

"Great cities are springing up in the Australian colonies; and watering-places, to which the citizen takes his family to enjoy the sea-breezes during the summer time, are coming into being. English tastes and habits are produced at the antipodes; and among these a love of natural history may be prominently reckoned." Let us hope that the treasures of the deep, once designated "*inutiles Alga*," but now esteemed as "*Ocean's gay flowers*," and obtaining "*a local habitation and a name*" in the Vegetable Kingdom, may lead on many to the study of the marine flora, which, on these coasts, is supposed to number about 1000 species. Such a work as Professor Harvey's is indeed a suitable companion for the "*citizen and his family*" at the sea-side, and it may be regarded as justly entitled to stand side by side with the terrestrial flora which we have been considering. Indeed, Dr. Mueller, who rendered Professor Harvey much assistance in the preparation of his *Phycologia Australica*, by sending him specimens of Algae from Victoria and other parts of Australia, includes the Marine Flora in his estimate of our vegetable kingdom. "According," says the Doctor, "to a computation instituted by R. Brown, in 1849, the number of plants known from New Holland and Van Diemen's Land scarcely amounted to 7000. Botanical researches in West Australia, Tasmania, South Australia, and the colony of Victoria, have added since, from places formerly inaccessible, exclusive of Cryptogamia, at least 1000 species. Assuming that the increase of new Australian Cryptogamia plants comprises 500 species, which cannot be considered overrated, when we remember how far alone our Marine Flora, through the investigations of Professor Harvey, became augmented; and if only of those plants which resulted from the North Australian expedition, 500 are regarded as wanting in existing former collections; I believe we may then safely assume that we are at present more or less acquainted with 9000 Australian plants." Arguing from these premises, and the scantiness of vegetation in Central Australia, Dr. Mueller expresses an opinion that in all probability the whole vegetable empire of Australia, inclusive of Tasmania, does not comprise above 10,000 species, without reckoning fungi. This computation was made in 1857; but we are not aware that the Doctor has materially altered his views on the

subject since that period. Little, indeed, is known of the Cryptogamic botany of Australia with the exception of the sea-weeds and ferns, and of the latter a new and systematic arrangement is much needed, as many species have been discovered since the days of Brown. It was reported that Mr. Moore, the Director of the Botanical Gardens, contemplated the publication of a work on the ferns of Australia; but, should this be the case, there will still remain a vast field for discovery in the mosses, lichens, and fungi, many of which are as yet undescribed. Dr. Mueller remarks that in North, North-Western, and Central Australia Cryptogamic plants diminish in number with the decrease of atmospherical humidity to such an extent that their relative proportions to the rest of the vegetation is probably much smaller than in any other part of the globe, mosses and lichens being almost entirely excluded from many extensive tracts of the country. Probably this may be true in a dry season, but as *Usnea Carbata* was noticed in latitude 19° S., and *Funaria hygrometrica* just on the border of the tropic, it seems but reasonable to suppose that, in a season moderately damp, many cosmopolitan species of mosses and lichens would spring up, as well as numerous fungi. However this may be, it is satisfactory to know that there never was a period since the foundation of the colony, when greater attention was paid to the vegetable kingdom of Australia than at the present time; and that too by men who have a European reputation, whose names and labours are, perhaps, better known by the educated in London, Paris, and Vienna than they are by the same class in Sydney. The influence of such enquiries does not extend merely to the promotion of botanical knowledge, properly so called, but it embraces a much wider range, being calculated to develop resources which may hereafter be turned to account in medicine, commerce, and the arts. Dr. Mueller, in his published works, has already given many useful hints on these subjects, especially in reference to plants possessing medicinal properties, as well as volatile oils, which may hereafter prove highly valuable. No doubt, these remarks will be duly noticed by Mr. Bentham, in the "*Flora Australiensis*," when he is describing the plants to which we refer in the orders of the *Myrtaceae*, *Lamiaceae*, &c. Already something has been done, both in Sydney and in Melbourne, towards the investigation of useful and medicinal plants; and, as a necessary consequence, Mr. Bentham's book will give an increased interest to these important enquiries. At all events, we feel thankful that a work is proceeding which must tend so effectually to promote the course of botanical science in these colonies, and to make their resources known in Europe, and we wish Mr. Bentham and Dr. Mueller the most brilliant success in the prosecution of it. Their labours indeed are of a peaceful and unobtrusive character, unconnected with the stirring politics of the day, and uninfluenced by the wars and rumours of wars prevailing in the world; but such men are quietly rearing for themselves a monument more enduring than brass, which may continue to exist when the startling events of the present age have ceased to exercise their influence on mankind and the heroes, now flushed with military and political glory, have passed into "dull cold marble, where no mention of them more must be heard of!"

Office of Agent General
for South Australia,
5, Copthall Court

Cheques received London, 27 July 1863
E.C.
& signed by me & paid into Messrs Drummonds
Sir, hereon on account of Mr Bentham.

I have the honor to acknowledge
the receipt of your note of the 25th
July, containing a note from Governor
Daly to yourself. I beg to return
that note. As you state that
Mr Bentham's work is completed
and published I am authorised by
the Treasury at Adelaide to pay to
him £50. — As you further state
that you are authorised to receive the
money for that Gentleman, I beg to
inclose a Receipt, and a Copy of the
receipt for you to be good enough to
sign. You may please to pay
these receipts duly signed by you
^{Mr Bentham's}
into ~~your~~ Bankers Mess Drummonds
to be presented to me and I will then

To Sir Wm J. Hooker,
Director of the Royal Gardens
Kew.

hand Mr Drummond a cheque
for the amount.

If any other arrangement is more
suitable to you to save you trouble
may adopt it: the cheque will be
in readiness for you.

It is highly interesting to me to be
the medium of a settlement in a
subject of such extraordinary importance.

I should much esteem it if you
would have the goodness to permit
two copies of the printed Paper "Colonial
Flora" to be forwarded to me.

As the vineyards in South Australia
are growing rapidly into importance
I feel persuaded that it would form
a subject of great interest if we could
transplant the Cork Tree to that
Colony. I have hinted to that
Government in some private letter.
I perceive the desirableness of doing so
But I have no instruction or authority

to incur any expense as yet.

Probably if I were enabled to
convey your valuable opinion as
to the feasibility of the operation,
your willingness to aid it, this
would be the means of exciting
attention to a subject which to me
at least appears well worthy of
consideration.

I have the honor to be,

Sir

Your obedient humble servant,

G. S. Watters

Agent General
for South Australia.

New South Wales

80

No. 108

Treasury, Sydney.

19 December 1866

Dear Sir

I beg to acknowledge,
with thanks, your note of the
15th October last, having reference
to the contribution of this Colony
towards Mr. Bentham's Flora

Australiensis,

W.D. Hooker Esq.,
M.D., F.R.S.

Kew.

London

Australienses, and to inform
you, in reply, that the sum
of £100 - - - for their object,
was remitted to Captain Mayne,
on the 21st September last.

I am, Dear Sir,

Yours faithfully,

Geo

The Treasury, Queensland
11 December 1868.

1136/68 Sir;

Referring to your letter of
the 25 September last, enclosing an
Application for Mr. George Bentham for
the sum of £50, as the Contribution of
Queensland towards the 4th Volume of
"Flora Australiensis" - I am instructed
to acquaint you that the Crown Agents,
Messrs. J. & J. Morgan & Co. will pay the
sum applied for to Mr. Bentham, upon
application.

I have the honor to be,

Sir,

Yours most obediently

R. L. H. W.

Charles L. W.

Mr. J. & J. Morgan

Esq.

Royal Gardens
New.

140/69

8, Victoria Chambers,
Victoria Street,
Westminster, S.W.

8th April 1869

Sir,

£100

I have received from the Treasurer of Victoria, Australia, one hundred pounds which I am directed to pay to you, being the subscription of the Government to the work "Flora Australiensis" for the 4th Volume.

I enclose a form of account in duplicate which, perhaps, you will be good enough to sign and return to me when I will send you a cheque for the amount.

I have the honour to be

Sir

Your most obedient servant

W. H. R.

Agent-General for Victoria

George Bentham Esq. }
F.R.S. P.L.S. }

✓
Queensland Government Offices,
32, Charing Cross, London.
March 27th 1871.

Sir,

In reply to your letter of
the 26th instant, I have to inform
you that I have received a —
communication from the Colonial
Secretary, Queensland, dated 25th
January, by the mail which
arrived on the 24th instant, in
which it is stated that the Crown
Agents are authorised to pay you
the subscription on account of —
your work the "Flora Australiensis".
Your application therefore, should

George Bentham Esq
25, Wilton Place,
S. W.

be

be made to the Crown Agents.

The Colonial Secretary states that the 15 copies of the 5th volume mentioned in your letter of the 21st September last, as having been forwarded, had not been received.

I am,

Sir,

Your obedient servant,

J Douglas

88/72

8. Victoria Chambers,
Victoria Street.

Westminster S.W.

11th Jan'y 1872

Sir,

I have the pleasure to forward
in a cheque at Mr. Vernon's request for £100
payment of the subscription of the Journal
of Victoria for the 6th Volume of the
era Australiensis for which you have already
in your receipt.

Yours
Sir

Your obedient Servant

Bentham Ege F.R.S.
26 Watton Place
S.W.

A. Martineau

in many instances the use of

459/74

8. Victoria Chambers.

Victoria Street.

Westminster, S.W.

25th Feb 1874.

Sir,

I have the honour, by
direction of the Agent-General
for Victoria, to inform you
that we have received authority
to pay you £100. I enclose forms
of claim, and, if you will be good
enough to fill them up the Agent-
General will be pleased to hand
you a cheque for the amount.
I have the honour to be,

J. Benham Esq^r

J.R.f. &c &c

25 Wotton Place

Kingsgate bridge

?

Sir,

Your most obedient servant

J. Martley

Noone Gardens, New

July ²⁴ 25. 1878

Sir,

It is with peculiar
pleasure that I call your
attention to the publication
during the present year
of the seventh and con-
cluding volume of the
Flora Australensis.

~~This immense undertaking
has engaged the unremitting
attention of ~~the~~ the author
G. H. B., late President of the Linnean Society,
Mr George Bentham during
the last sixteen years~~

And I believe that this
work occupies a unique
place in botanical literature.
I am not aware of any other

R. S. W. Herbert Esq
Colonial Office

which treating of the vegetation
of so large a portion of the
Earth's surface has been
successfully brought to a
conclusion

For the last sixteen
years it has ^{engaged} ~~engaged~~ —
~~together with the~~ ~~former~~ ~~Plants~~
~~in which I am myself~~
~~associated~~ ~~to~~ the unremitting
attention of its author the
George Bentham Esq. F.R.S.
~~late~~ ~~President~~ ~~of the Linnean~~
~~Society of London.~~ ~~He~~ ~~is~~
~~the~~ ~~intention~~ ~~of~~ ~~Bentham~~
~~has~~ ~~daily~~ ~~visited~~ ^{who has} ~~carried~~
on the ^{studies} labours necessary
for its elaboration in
the library and Herbarium
of the Royal Gardens
— so largely enriched by
his own munificent gift.

The utility of the work
 in describing in a uniform
 manner, and in easily
 intelligible language, the
 plants of a country so
 rich in vegetable products
 cannot be overestimated,
 and is a matter of daily
 experience. Without such a
 work these plants could
 not be accurately discrimina-
 ted and named and
 therefore be turned to useful
 account with any certainty.

In a scientific point of
 view the Flora Australensis
 is of inestimable value.
 It records the nature of
 the great bulk of the Flora

with all the knowledge
and skill of one of the
greatest living systematists
and ^{this} while the national
conditions ^{of the country} can still be
easily distinguished from
the inevitable changes which
must follow agricultural
occupation and ^{the operations of} a wide-
spread commerce.

The accumulation ~~of~~ in
London, and principally at
Kew, of the important botanical
collections made by successive
travellers and explorers, from the date of
^{Capt. Cook's} ^{voyages} to the present day
have made the preparation
of ~~this~~ the Flora Australensis
in this country a matter

of necessity. The labours
 of these men are bound
 up with the history of the
 Australian Colonies, and
 the mere bare enumeration
 of Australian plants apart
 from the names of their
 first discoverers, would be an
 ungrateful obliteration of much
 that Australians will
 always hold in respect. Nor
 must it be forgotten that
 many species obtained
 through the industry of these
 early collectors have never
 been gathered since.

To no one was the
 force of these facts more
 apparent than to Baron
 von Mueller the distinguished
 Government Botanist of Victoria.

with just newly did he therefore
and waive his own preminent
great claims to the authorship of
and the Flora Caschiana. But
and by with singular generosity he
has transmitted to this country
the his immense Caschian
herbarium the examination
of which was indispensable
to the proper elaboration of
the work. He furthermore
kindly allowed duplicate specimens
to be taken from his
collections for preservation
at Kew as the authentic
types upon which the
descriptions published in
the Flora had been
based.

I trust that in the completion
 of this, the most important
 of the series of colonial
 floras projected by my
 late father you will
 recognise a part - of our
 own needs - of the
 usefulness of this establishment
 to our colonial empire
 and of our desire to
 cooperate with the colonial
 governments in every step
 towards the development
 of their vegetable resources.

I venture to
 trust that in the completion
 of this, the most important of the
 series of colonial floras, projected by
 my late father, you will ^{be} recognised
 as ^{an} ^{important} ^{contribution} to them and

an evidence of the value of Baron von Mueller's
series, & of the Entomological Melbourne
& his gathering the
views, ~~which~~ development of the
mechanisms. Also reported records
of our (Clarified) Empire.

Downing Street

9th August 1878.

Sir,

I am directed by
the Secretary of State for the
Colonies to, acknowledge the
receipt of your letter of the
24th of July, calling his attention
to the publication of the seventh
and last volume of the Flora
Australiensis, compiled by
Mr Bentham, late President
of the Linnean Society of

Sir J. Hooker K.C.B. & C.B.

London.

2. I am to request that you will convey to Mr Bentham the expression of the Secretary of State's gratification at learning that this important work which Sir Michael Hicks Beach is aware has long engaged Mr Bentham's attention, and which will remain a valuable and exhaustive record of the Botany of the Australian Colonies has been brought to a satisfactory termination.

3. Sir Michael Hicks Beach will have pleasure

in

in transmitting a copy of the correspondence to the Australian Governor and for communication to Dr Von Mueller who has so largely and generously contributed to the success of the undertaking.

4. A copy of Mr Bentham's work has been ordered for the use of the Library in the Colonial Office.

5. Sir Michael Hicks Beach feels no doubt that the facilities which you have afforded to Mr Bentham in carrying on the studies necessary for the elaboration

elaboration of the work
have been of great use to
him, and that as on many
previous occasions, the Colonies
are indebted to yourself for
much personal care and
attention.

I am

Sir,

Your most obedient Servant

Robert W. Herbert.

We are sure our readers must have felt gratified by the honor which Queen Victoria has been pleased to confer on our Government Botanist, and through him on the colony of Victoria, by conferring on Baron Von Mueller the distinction of Knight Commander of St. Michael and St. George. We are glad also to know that the venerable George Bentham, who for upwards of half a century has been an earnest and zealous worker in descriptive Botanic Science, has been made the recipient of the honor of C.M.G. That he also has not been made a knight may perhaps find an explanation in the fact that, as is believed, he is averse to all titular distinctions; moreover, the rule is hardly ever relaxed which requires a member of a British order to pass through all its grades; unless, therefore, this incomparable botanist has an invincible objection to a knighthood or baronetcy, it may be considered certain that he will be promoted ere long, after his illustrious career not merely in connection with the vegetation of Australia, but also that of other portions of the globe. They who are acquainted with the labors of Baron Von Mueller, and the immense benefits he has conferred upon the Australian colonies, and Victoria in particular, will recognize his claim to the honor for which such an opportune time—the completion of the *Flora Australiensis*—has been chosen. The Baron's work has been carried on uninterruptedly in Australia for nearly a third of a century, his personal researches extending over lines of about 23,000 miles in extent. From 1817 to 1852 he examined a large extent of South Australia for its plants, to the Victorian borders, after a previous University career. He was created Government Botanist by Mr. Latrobe, and in 1857 became Director of the Botanic Garden under Sir Henry Barkly. He explored the then trackless Australian Alps from 1853 to 1855, when he joined Gregory in the expedition sent out by the Duke of Newcastle through tropical Australia, an expedition which was sixteen months away from any settlement. These and some subsequent travels in West Australia and elsewhere enabled him to amass such a large extent of elaborated collections, to which also numerous emissaries and amateur correspondents contributed, that, mainly through the aid of the Baron, the completion by Mr. Bentham of the Universal Flora of Australia, commenced by Robert Brown in the beginning of the century, became possible. Thus the *Flora Australiensis* arose and was carried out by Mr. Bentham in seven large volumes, a work to which Baron Von Mueller largely contributed, and which indeed could not have been undertaken or completed without his co-operation. It is a work which will stand as a monument and reflect credit on Victoria for ages yet to come, and is at the present time unequalled, no work of the kind having yet been completed for any of the other great divisions of the globe—not even for Europe. The Baron's own independent works comprise about twenty volumes of various sizes, descriptive or applied, concerning Australian plants, irrespective of reports, stray essays and the like, besides the introduction, testing and distributing of numerous exotic plants. He may also fairly claim to have greatly advanced the geographical exploration of Australia, and also that several most important geographic expeditions arose through his action. His labors through laboratory work and the dissemination of varied information in promoting ever since the first Paris Exhibition the industrial recognition of the vegetable products of Australia are well known, though not at present encouraged as they ought to be. It may be supposed that this bestowal of so high a mark of distinction from the throne of Great Britain is to some extent owing to a wish on the part of the Home Government to encourage scientific research in this, the fifth continent, where Baron Mueller is now the senior scientific worker, and which occupies a larger area than all the other British possessions in the eastern hemisphere. It is also a great encouragement to Baron Von Mueller to proceed with his researches and labors, for abundance of toil remains in finishing what he has begun; a supplement to the *Flora Australiensis*, which now solely devolves upon him, being not the least important. And we may trust that the Government of Victoria will liberally respond to the wishes of the Baron.

From the London Times, 1879