

characters of the latter and must I suppose  
remain a section of it

*Sectorea* Dr. is evidently a *Chrysopsis* have you  
seen it?

I limit the tribe of *Asteroides* to these  
two series *Heterochromae* and *Homochromae*  
and to the subtribe *Rachaeae* with the  
anthers obtuse and entire at the base (except  
a very few sp. of *Olearia* and *Colimnia*) and the  
style branches of the ♀ flower tipped with an  
appendage (except in *Rachaeae* and a few other  
cases where the ♀ fl. are sterile), and I transfer  
all other *Asteroides* of Dr. to a large tribe of  
*Muloides* (to include  *Gnaphalieae*) with the  
anthers sagittate at the base with pointed or  
tailed awicles (except in a very few sp. of  
*Plumea* and *Thaunton*) and the style branches  
often without appendage, or only a mere  
papilion edge beyond the stigmatic lines and  
I divide these *Muloides* into the following  
subtribes, with few exceptions to the following characters

\* *Pachonanthae*. *Capitata* *Dioica*. Fl. & filiform  
/ *Lonicaria* Willd. *Hymenophyllis* Gand. *Lynchodendron*  
Roj. *Brachyloca* Cass. *Pachonanthus* Linn)

*Plucheriae*. *Capitata* *heterostamum* Fl. & filiform  
fl. bract. none or herbaceous. Recept. epaleaceum.  
Styl. fl. & ovary subulate.

*Helagiaeae*. *Capitata* *heterostamum* Fl. & filiformes  
fl. bract. pauciflorae. Fl. & paleae, receptaculi  
sublexis or involute. ( *Cylindrocline*, *Plapharuperme*,  
*Strophia*, *Loay*, *Pitocarpa* ( *Boanilla* ), *Microrus*  
( *Phyllanthus* ), *Diaphea* ( *Calymmanandra*, *Helagiosorus* ),

25, WILTON PLACE.  
S.W.

Dec 26/70

My dear Gray

Since I wrote last I have received  
your kind reply with many thanks. I have  
not yet examined *Otolana* having left it  
with a few other apparently exceptional plants  
till I get the *Helianthus* and *Senecionidaceae*  
my head. I have been so immersed in  
*Asteroides* that I have not had time to go  
back upon strong genera. I had left behind  
I now proceed summarily to report progress  
hoping to suggest some remarks on your part.  
These *Asteroides* are quite bewildering. There  
are no definite land marks. *Aster* runs into  
*Olearia* etc on the one hand, into *Eragrostis* on  
the other and this again into *Corypha* and all  
other genera or nearly all of the *Heterochromae*  
series are in the same plight or are monotypic  
and it is nearly as bad with the *Homochromae*  
series; every character breaks down in one  
species or another - and it would do no good to  
unite all into one genus for then there would  
be the same difficulty about subgenera and  
sections. I have been obliged to draw arbitrary  
lines. I have kept up the Australasian *Olearia*

the present L. American, *Chilodactylum* and  
*Diplostegium*, the L. Helian *Ceramodendron* and  
*Melanodendron* and gone a little farther than  
you have in reuniting such genera with *Abies*.  
I have retained *Pericocarpus* with its botanical  
aspect though with some hesitation - *Diplopappus*  
appears to me to be quite reasonable and the  
sterility of the ray flowers in *Galatella* is not  
I think of sufficient constant importance to  
make a generic character. I hesitated much  
about *Noticastrum* which Weddell includes in  
*Abies* without doubt. It differs from most  
*Abies* in the P.S.O. ribbed achenes but then  
occurs also in such of your *Calliastrium*, as belong  
to *Helianstrum* DC. and then *Abies marginata*,  
K.B.K. (a true *Noticastrum* but not I think the same  
as the more southern L. *arundinacea* with which  
Weddell unites it) resembles too closely *Abies* with  
the single (L.S.) ribbed achenes to be generically  
removed from it. I should have liked in order  
better to separate *Abies* from *Erigeron*. to have  
kept up the L. African *Felicia*s with their  
*Erigeron*oid pappus but then the *Agathaea*s  
show every gradation from *Felicia* to *Agathaea*  
*Natalensis* which is scarcely to be distinguished even  
as a variety from some forms of *Abies alpina*.  
I have adopted pretty nearly your and Weddell's  
views of *Erigeron* and *Conyza*. As to *Ptiladenia*  
so nearly allied to *Erigeron* (locusts) and *Conyza*  
I think it may well be distinguished by the

large <sup>(long)</sup> beak and *Abies*oid pappus but then it  
must include the L. American *Microglossa* and  
the *Abies*oid *Erigeron* or *Conyza amorphoglossa*  
and *perisperm* Hook, a new *Hemilaza* species and  
the *Brachyactis* Ledeb. (*Erigeron* or *Conyza alticola*  
to which you properly refer your *Abies* argument) -  
but *Tetramolopium* must (as you define it  
as a sect. of *Ptiladenia*) must I think be retained  
as a distinct genus close to *Conyza*. I have  
followed you as to smaller genera except that  
I think *Dichotophora* must go into *Prothionia*  
In the *capitata* *Leptocoma* is identical with  
*Rhynchoglossum* etc. In the *homochromous*  
series I perfectly agree with you in the  
restoration of a number of small genera to  
*Diplopappus* except that I think that *Chaer-  
nema* belongs rather to *Chrysopsis* and I  
think that *Ericameria* must be kept up as  
much nearer to *Linopsis* than to *Diplopappus*  
(or rather *Haplopappus*) unless the three be  
united which would be going too far. *Lept-  
opsis* (which I think must include *Bigelovia*)  
would indeed be a very natural group were  
it not for the L. *cornuta* Roth. *Escoparia* Karstke.  
and L. *divariata* (Pursh) which have so different  
a habit and the latter sometimes 2 or 3 ligular  
two or three *Andros* shrubs (*Haplopappus hypo-  
bureum* Turra *Brachyactis pedunculata* K.B.K. and  
another) with the habit of *Diplostegium* but  
referred by Ach. R. to *Linopsis* have the

Menopius and Pilago).

Enaphalium

Helichrysum

Auzianthem

Athysanella

} Not yet fully worked over

Inula Receptaculum spaleaceum. Ho  
Regulator v. O. Hylis rami apice rotundati

Brykthalmeae Recept. paleaceum Coctera  
Inuleorum.

The Inuleae contain Codonocephalum Tenax  
(Pronunera Lch. Dyp.) Inula (to include Schiz-  
gynne D. Inulodes Lch. Dyp. etc.) Popèria D. (in  
chryso. Regolletia lanceolata Haber)  
Gratia Dyp. (Pavallera Lch.) Jacuvia Can.  
(reduced from D.) Iphiona Can. (Var.  
themia D. and three Regollettias forming  
Lch. Dyp. Carphopappus) Chlazonappus Lch.  
Dyp. Picroa Webb Regolletia Can. (reduced  
to P. perezianus P. mucronata and perhaps  
P. vespodonta) Picoa Can. (including Pentalium)  
Pulicaria Goetz (including Strabonia Poloa  
Tracocurea Jacuvia icula Platyphata Dyp.  
etc.) Doryphorotemma sp. nov. Apr. tron.  
Amblyocarpum and Carpasium

The Brykthalmeae besides the usual  
genera include Phanterium and  
Chrysopappus of which I have the Chinese  
species and another from Troy Apr.

Apkanortepus Thapsi and Grazza  
must I think be removed to Anthemideae  
Hochstetteria to Mutisieae next Decoma

Now I should very much like to have  
your opinion as to these things, and  
especially as to the bringing of the *Guayakos*  
into the same general tribe with  
the *Muckineen* and *Mukla*.

It is a sad thing to see matters only  
getting worse and worse in France  
and the end must be dreadful whether  
the French succumb or succeed the two  
nations are now so thoroughly exasperated  
against each other means hardly better.  
The other day from Decaine dated the  
9<sup>th</sup> Dec when they had just heard of  
the recapture of Orleans by the Germans  
- but breathing the most determined spirit  
the Institut had set the example and the  
Garden had followed it in exchanging the  
pen for the sharpest sabre, submitting cheerfully  
to the "regime de cheval" in full confidence  
that the tide would turn that they  
should expel the enemy and better  
retaliate upon them - No one dreams  
of peace and goodwill. What a horrible  
comment on the declamations and prophecies  
of the Peace Societies.

Ever yours, sincerely

George Newman



Bentham, George. 1870. "Bentham, George Dec. 26, 1870." *George Bentham letters to Asa Gray*

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