

St. Louis, Mo., May 7<sup>th</sup> 1857.

Prof. Dr. Torrey -



My dear Sir -

Being apprized by Mr. E. Durand, of Phil., that the plates I commenced printing and was prevented from finishing were being printed under your supervision, I take the opportunity to thank you for my dispositions, arrangements or suggestions suggested by you in the interest of the work, and I am gratified Mr. Durand <sup>so readily acquiesced</sup> ~~did~~ in my name. At the same time I would ask you to have 10 extra copies of the plates done for me, provided the cost does not exceed \$5.00. If so, let it be done up to that sum; I would be pleased if you would inform me about that point - simply directing, under my address, to "St. Louis, Mo." - but I know your time is valuable! -

If the Proceedings of our St. Louis Acad. of Science has come to your view, I would add some remarks about the 'Series', which perhaps you may have a free moment

to peruses. There are some improvements on the single files, as published in the Philada Acad. <sup>Proceedings</sup> some deceptive external, or <sup>"type"</sup> - , affinities having been corrected. In the Phila Proc. I have thought that Loasaceae and Passifloraceae might connect, but the genera being tropical almost entirely I could not make sure, and found cause to disconnect them.

I have paid most attention to Di'cotyledons, and have arrived at the following results: 1) There is a positive single file ~~or~~ connection, a beginning and end 2) If subdivided into the 5 chief heads <sup>which</sup> you find in the St. Louis Proc., each of these files presents two points, where a striking identity of external obtains; so as to be realizable by the figure of a tra-  
versing of files, assuming a common character at the points of intersection. 3) These intersections, producing three parts to each file, divide the same so as to present as many distinct habitus, terminated at either <sup>end</sup> by an epigynous form belonging to that habitus, as e.g. Ribes and Abipralis at the extremes of the crassulaceo-saxifragae series. 4) All ~~these~~ <sup>respective</sup> tripartitions of these bars seem to round off into themselves, besides connecting

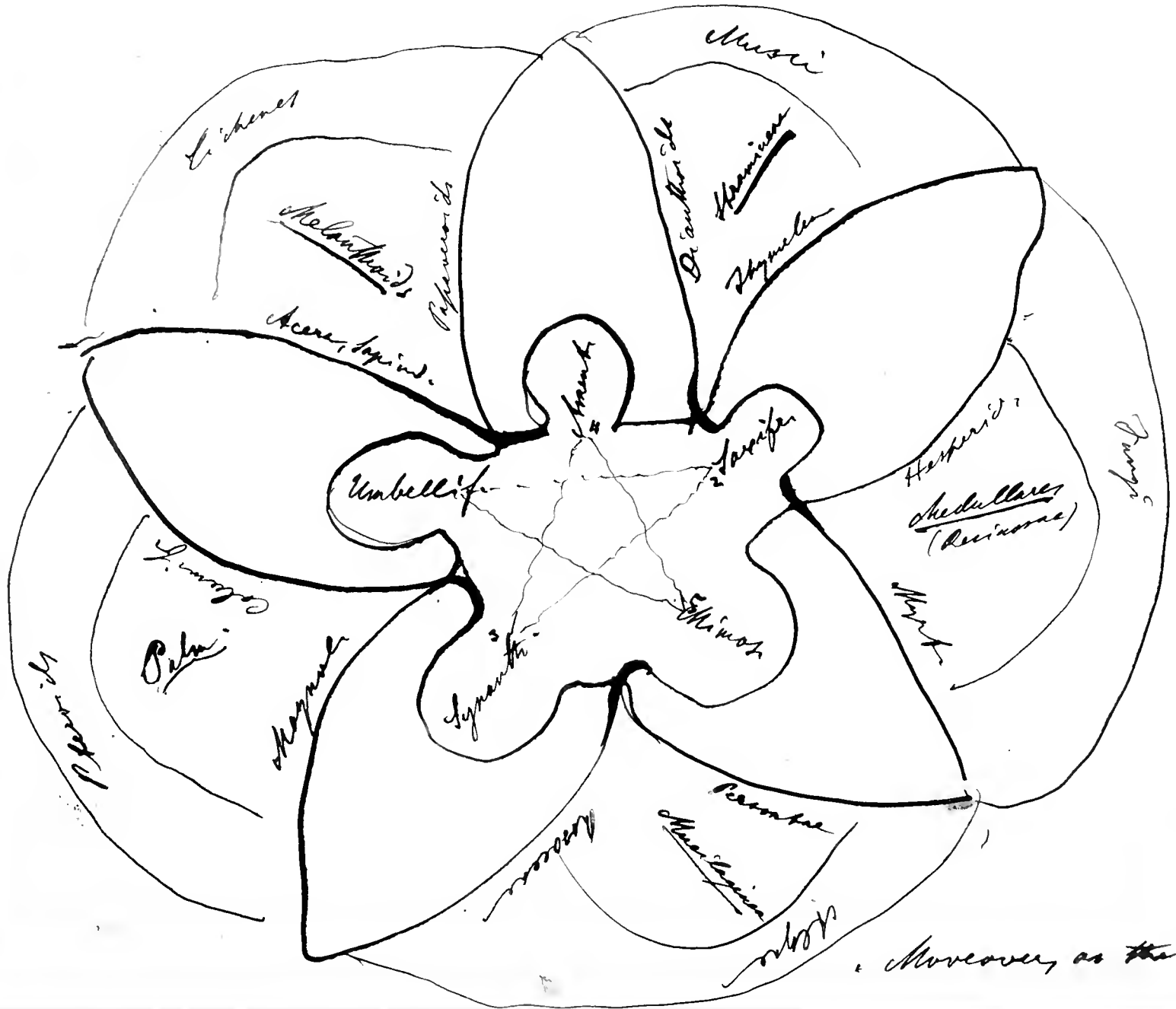
back and forward, so as to be realizable as the  
links of a chain: Begoniaceae round off into Hydro-  
charitaceae - Nymphaeaceae (epizygnous), besides connecting with  
Nepenthes - Violaceae - Cisso hypogynous, and aralioid - umbellif-  
ero - epizygnous forms. Begoniaceae and <sup>winged</sup> Umbelliferae  
have a less striking relation, and the begoniaceous habit  
is repeated in Balsaminaceae. The climbing, cleistoid - <sup>pinate</sup>  
form, <sup>of</sup> Torraceae, their petals and epizygnous disc "monocot Um-  
belliferae", while Barbonias, or "epizygnous Glaucium" or "epi-  
zygnous Capparis" perhaps, commence the Hypericoid - Cero-  
<sup>is</sup>anthus - portulacaceae line, terminating with Cacti,  
that bear so striking a resemblance to Barbonias ("epi-  
zygnous Glaucium", or, "Cereus-flower on a glaucous stem")  
as to justify the conception or figure of recurrence on  
a circular junction of ends, including the Ceratoid types  
Again Cacti and Ribes round off the crassae type, Lud-  
wigiads and Philadelphus the myrtiflorous one; Hydran-  
ger and Viburnum the personato-tubiflorous one; Centa-  
urtheas and Trachelium (one coming from Louiceo-Valerianae,  
the other from Lobeliaceae merging into Campanulo-Cucurbit-  
aceae) include the aggregate or compositae type. Cuscut-  
itaceae and Gronoviere (allied to Diphtherocarpae etc.) seem to  
round off the Parisifloro-Columniferous series. As another

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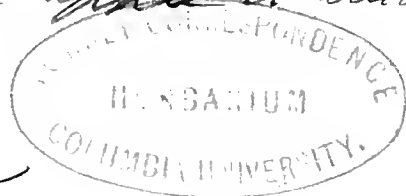
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I have little doubt many more rules may be eli-  
 cited yet, on the basis of the absolute series of  
totality of relation and, on the other hand, of superficial  
 relations or habits. After all the apple (Pyrus), being  
 the last (epigynous) evolution of Rosiflorae, <sup>at</sup> the head of  
 the Kingdom, by its cross section of fruit may be found  
 furnishing the A and  $\Omega$  of the whole schematic figure



five points of intersection have great and striking  
 resemblances (<sup>Umbelliferae - Compositae - Liliaceae</sup> Calycanthus to Cactus), and certain parts of  
 the base likewise (Dianthus, Fagus): they may aptly  
 represented ~~as~~ as meeting at a central point or axis.  
 The subtending 'tendons' will then assume their round,  
 as a closed set or habitual type, all, except the crassae  
 type, being remarkable for their nucleiferous constitution  
 (Umbelliferae, Mentaceae, Mimosaceae, Leguminosae), and  
 thus the panto-pentic figure of the apple is arrived  
 at, as subjoined.

With much obligation I remain  
 Yours respectfully



J. C. Hilgard, M.D.

